

VISIT...

LANZAROTE
Caliente.COM

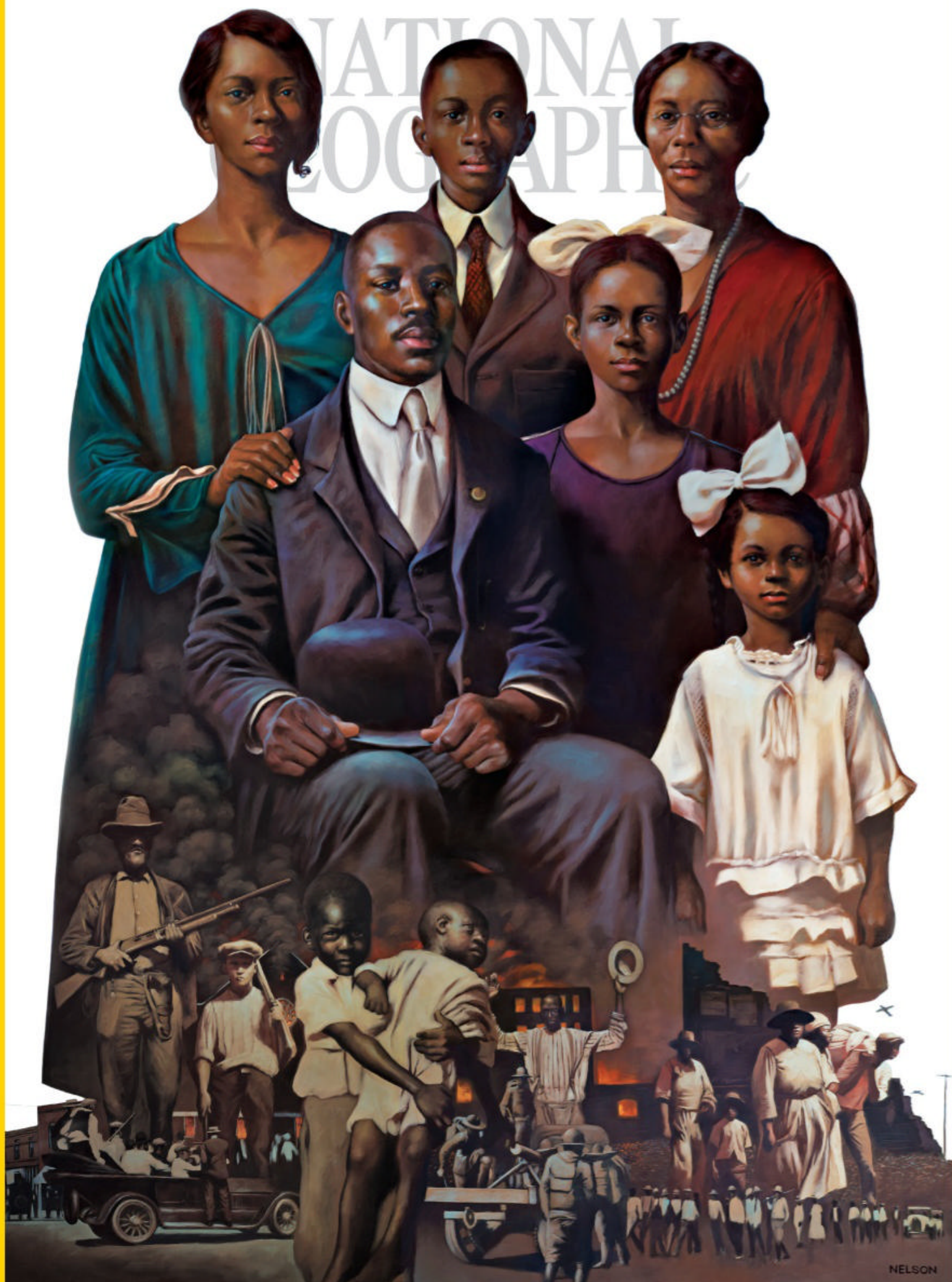
06.2021

RECKONING WITH THE PAST

REVEALING OUR
THOUGHTS ON RACE
by Michele L. Norris

A CENTURY AFTER THE TULSA RACE MASSACRE
by DeNeen L. Brown

LEARNING
OUR FULL HISTORY
by Elizabeth Alexander



NELSON

WATCH 'RISE AGAIN: TULSA AND THE RED SUMMER' ON NATIONAL GEOGRAPHIC



For details, visit [IKEA-USA.com/warranty](https://www.ikea-usa.com/warranty)

SEKTION/SINARP/HASSLARP
Kitchen

\$2259

Based on a 10'×10' kitchen price

Pinch salt, not yourself.

No, it's not a dream. It's a beautiful, sustainable and affordable quality kitchen. We even have a team of professionals to help you every step of the way, from measurement to planning to installation – even financing options. Oh, and did we mention it has a 25-year warranty? On second thought, maybe you do need that pinch.

Learn more at [IKEA-USA.com/Kitchens](https://www.ikea-usa.com/Kitchens)

What's included in the price? The kitchen price includes cabinets, fronts, hinges, cover panels, deco strips/moldings, legs and toe-kicks. All kitchens also include soft-closing hinges. Your choice of appliances, lighting, knobs/handles, sinks, faucets, countertops and interior accessories are sold separately.

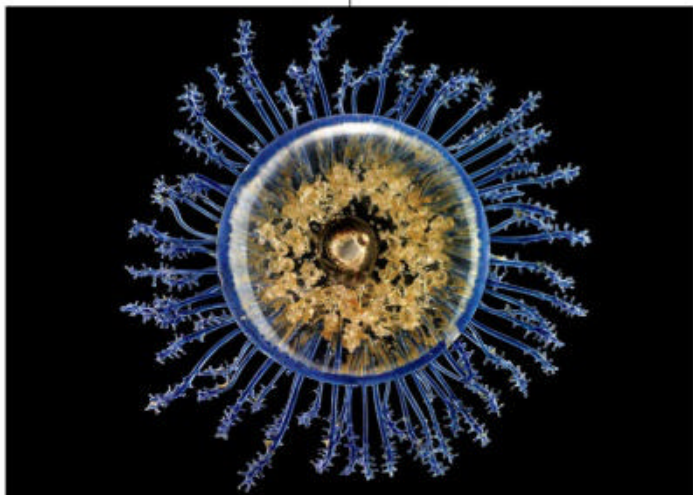


©Inter IKEA Systems B.V. 2021



CONTENTS

PROOF



8

Glass Sea Menagerie

Two 19th-century glass artists made detailed models of sea life, for use in research. Today they're collector's items and the objects of a still life odyssey.

PHOTOGRAPHS BY
GUIDO MOCAFICO

EXPLORE

17

THE BIG IDEA

A Fan Letter to My Favorite Spacecraft

The Fermi Gamma-ray Space Telescope sees a cosmos so different from what our eyes see.

BY LIZ KRUESI

BREAKTHROUGH

'Bacon of the Sea'?

Aquaculturists say this marine alga is rich in protein—and when fried, pretty bacon-y.

BY HICKS WOGAN



ALSO

- A Yellow Penguin
- Regrowing Joints?
- Bug Takes a Beating

On the Cover

Kadir Nelson's painting "Tulsa" evokes both what had flourished and what was destroyed in a Black community in Oklahoma in 1921. African American families thrived in Tulsa's Greenwood district until white mobs' rage erupted into arson, shootings, and the loss of as many as 300 lives—now known as the Tulsa Race Massacre. ART BY KADIR NELSON



26

ADVENTURE

Tunnel Vision

Water whittled the cliffs and canyons of Utah's Zion National Park.

BY NORIE QUINTOS
PHOTOGRAPH BY
JOSH HYDEMAN

DECODER

Baking in Pompeii

Mount Vesuvius buried bakeries, but the bread survived. Now its recipe has been re-created.

BY ANNIE ROTH; PHOTOGRAPH BY REBECCA HALE

ALSO

- Animals With Pockets
- Planet Possible



SPECIAL REPORT: RECKONING WITH THE PAST

Tulsa Race Massacre

Enraged by prosperity in a Black community, white rioters attacked it in 1921, in one of the worst acts of terrorism in U.S. history.

BY DENEEN L. BROWN
PHOTOGRAPHS BY BETHANY MOLLENKOF
.....P. 62

The Race Card Project

Those conversations about race that seem too difficult? People are bravely starting them, six words at a time.

BY MICHELE L. NORRIS
PHOTOGRAPHS BY WAYNE LAWRENCE
.....P. 36

Envisioning Black Freedom

To stop perpetuating the racism of the past, the essayist says, “we must live like we understand what that history teaches us.”

BY ELIZABETH ALEXANDER
.....P. 82

FEATURES

Culture Clash

Mexico’s Maya beekeepers see their way of life threatened by Mennonite colonies’ expanding soy farms.

BY NINA STROCHLIC
PHOTOGRAPHS BY NADIA SHIRA COHEN
.....P. 112



The Tree at the Bottom of the World

On this warming planet, which tree grows the farthest south? Our team seeks it out.

BY CRAIG WELCH
PHOTOGRAPHS BY IAN TEH
.....P. 98

The Lure of Trieste

It’s been an overlooked gem in northern Italy. But the city may enjoy new recognition thanks to interest in its port.

BY ROBERT DRAPER
PHOTOGRAPHS BY CHIARA GOIA
.....P. 126

RECKONING
WITH THE PAST

Difficult Conversations

BY SUSAN GOLDBERG



A YEAR AGO a Black man named George Floyd lost his life under the knee of a white Minneapolis police officer. Floyd's death sparked massive civil rights protests around the world and a painful racial reckoning in the United States that is far from resolved.

One hundred years ago a white mob destroyed Greenwood, a prosperous Black district of Tulsa, Oklahoma, in a two-day rampage of looting, burning, and shooting that killed as many as 300 people and left some 10,000 homeless. The attack on what's remembered as Black Wall Street is one of the worst acts of terrorism in U.S. history—and I'm embarrassed to admit that until recently, I'd never heard of it.

In many respects, the distance between 1921 and 2021 is enormous. So much about our country has changed, and that includes significant progress

on extending equality and opportunity to all. And yet, in other ways and places, echoes of a segregated and hateful past remain. There are still massive economic disparities between Black people and white, and massive disparities in incarceration rates. And, as we have seen in the killings that preceded and followed George Floyd's death, systemic violence continues to claim Black lives.

National Geographic has been covering the human journey since its founding in 1888. Through the years, the mission has been much the same: to observe the world's people and cultures, to shed light on the human experience—and to show how much more alike we are than we are different. But only in the past several years have we directly tackled the topic of race—and that has resulted in some

An unknown photographer recorded this scene of people along Tulsa's Elgin Avenue looking north toward Mount Zion Baptist Church as it burned on June 1, 1921.

DEPARTMENT OF SPECIAL
COLLECTIONS, MCFARLIN LIBRARY,
UNIVERSITY OF TULSA

Tulsa documentary

Rise Again: Tulsa and the Red Summer describes white rioters' destruction in 1921 of a thriving Black district, and the recent discovery of a mass grave of presumed victims of that violence. The documentary film will premiere in June on National Geographic.

EXPERIENCE THE MAGIC OF THE GALÁPAGOS



Voyage aboard the National Geographic fleet to explore Darwin's living laboratory and travel alongside our National Geographic experts to the planet's most intriguing places. Enjoy close-up encounters with captivating creatures—from sea lions to giant tortoises—while snorkeling, kayaking, hiking, and exploring by Zodiac. When you're ready, we can't wait to welcome you on board.



NATIONAL
GEOGRAPHIC

EXPEDITIONS

To learn more about all our trips and to request a FREE catalog
[NATGEOEXPEDITIONS.COM](https://www.natgeoexpeditions.com) | 1-888-351-3274

of the most difficult and forthright conversations we have ever had with our readers and within our institution.

Of course, these complicated conversations aren't just happening here. They're everywhere—across dinner tables, at workplaces, in civic and faith organizations, and even with ourselves.

This month we look again at race, with a focus on Black-white relations in the United States, in recognition of the one-year anniversary in Minneapolis and the 100-year anniversary in Tulsa.

Despite the scale of the destruction, for decades the Tulsa tragedy was obscured, like the unmarked graves of its victims. Then in 2018, *Washington Post* reporter **DeNeen L. Brown** wrote about how Tulsa investigations had been thwarted, and her coverage helped get the inquiry reopened. With Brown's moving story in this issue, and a powerful documentary on our television channel, we revisit what happened in Tulsa and how it informs events today.

Also in this issue, an essay by **Elizabeth Alexander**—poet, educator, scholar, and president of the Andrew W. Mellon Foundation—explores how we can't escape our history but must reckon with it. "Without learning, without knowledge, without the voices and the experiences and the insights gained from a determined excavation of our country's past, we will never eradicate racism and racial violence," Alexander writes. "If we are to stop weaving white supremacy into the fabric of our country, then we must learn our full histories. We must live like we understand what that history teaches us."

Finally, we have turned to writer **Michele L. Norris**—and to you—to continue a frank conversation about race. More than a decade ago, Norris began the Race Card Project, in which she asked people to think about the word "race" and boil their thoughts down to six words. She expected few would respond. She was wrong. "I had no idea that what I was actually creating was a taproot that would carry me into people's most private spaces," she writes.

"I had no idea that there were so many people who were so eager to talk about race and identity that they would share their thoughts with a stranger." How many? So far, she has more than 500,000 six-word micro-essays, from every state and about 100 countries and territories.

Norris recently has brought the Race Card Project to the National Geographic Society, as a storytelling fellow. We'll support Norris in using a wealth of tools—audio, video, animation, cartography, photography, art, technology—to bring the project's archived stories to life. These aren't just binary conversations about Black and white people; this "quilt," as she describes it, pulls at all manner of cultural threads, from Latinos and Indigenous people to Asians and Iranians.



DeNeen L. Brown
Generations Lost
.....P. 62



Elizabeth Alexander
Envisioning Black Freedom.....P. 82



Michele L. Norris
Hidden Thoughts on Race.....P. 36

We invite you to add your thoughts about race and identity to the project. It's challenging to take a subject such as race and distill it into six words. We all have a lot of "race cards" inside of us, and no doubt they change with time and circumstance. I asked a friend who had participated in the project to share hers: "Only Black family in the neighborhood" was one of her race cards. "Suburban soccer mom. Doesn't fit narrative" was another.

So, what's my race card? This is a hard exercise, but reflecting on the difficult past year, on our fraught politics, and so many conversations I've had with friends and colleagues, for now I'll leave it at this: "White, privileged, with much to learn."

Thank you for reading *National Geographic*. □

PARTICIPATE IN THE RACE CARD PROJECT

To join this conversation, go to theracecardproject.com. Follow the prompts to add the six-word phrase that sums up your thoughts, experiences, or observations about race. Write more if you wish, and see the statements of others who've also come to share.

FREE DOWNLOAD



Introducing DaVinci Resolve 17

Edit and color correct video with the same software used by Hollywood, for free!

DaVinci Resolve 17 is a major new update packed with over 300 features and enhancements! Colorists get new HDR grading tools, AI based magic mask, color warper and more. Fairlight adds lightning fast keyboard and mouse sound editing tools. Editors get new metadata 'slate' view, smart reframing, proxies, keying, Fusion effects and more!

Next Generation HDR and Color Features!

New HDR grading tools, redesigned primary controls, AI based magic mask and more. The new HDR palette lets you create custom color wheels for targeted corrections, magic mask uses the DaVinci Neural Engine to isolate and track objects, and the color warper lets you morph colors in creative new ways! New DaVinci wide gamut image processing gives you even higher quality!

World's Fastest and Highest Quality Pro Audio Tools!

Fairlight features a powerful new engine that supports up to 2,000 realtime tracks with effects, dynamic and EQ. The new context sensitive edit selection tools and updated shortcuts make it even faster and easier to use, especially if you're switching from another system. You can now reverse clips, analyze loudness, view transients, preview video, move automation and more!

Powerful New Edit and Cut Page Features!

A new metadata 'slate' view with bin dividers makes it easy to sort and find clips based on scene, shot, camera, and more! There's also new audio trimming on the cut page, AI based smart reframing for changing aspect ratio, a new portable proxy workflow that supercharges edit performance, render in place, timeline based syncing, compositing, keying, Fusion effects and more!

Fusion Effects, Titles and Transitions for Editors!

DaVinci Resolve 17 lets you save anything created on the Fusion page as an effect, title or transition that can be used on the edit and cut pages! New animation curve modifiers automatically retime animations when clip length is changed, there are new vector shape tools for motion graphics, shared markers, and audio playback with graphical waveform!

DaVinci Resolve **Free**



DaVinci Resolve Studio ... **US\$295**
Free DaVinci Resolve Speed Editor
with purchase of DaVinci Resolve Studio

Learn more at www.blackmagicdesign.com

Available for Mac, Windows and Linux



PROOF

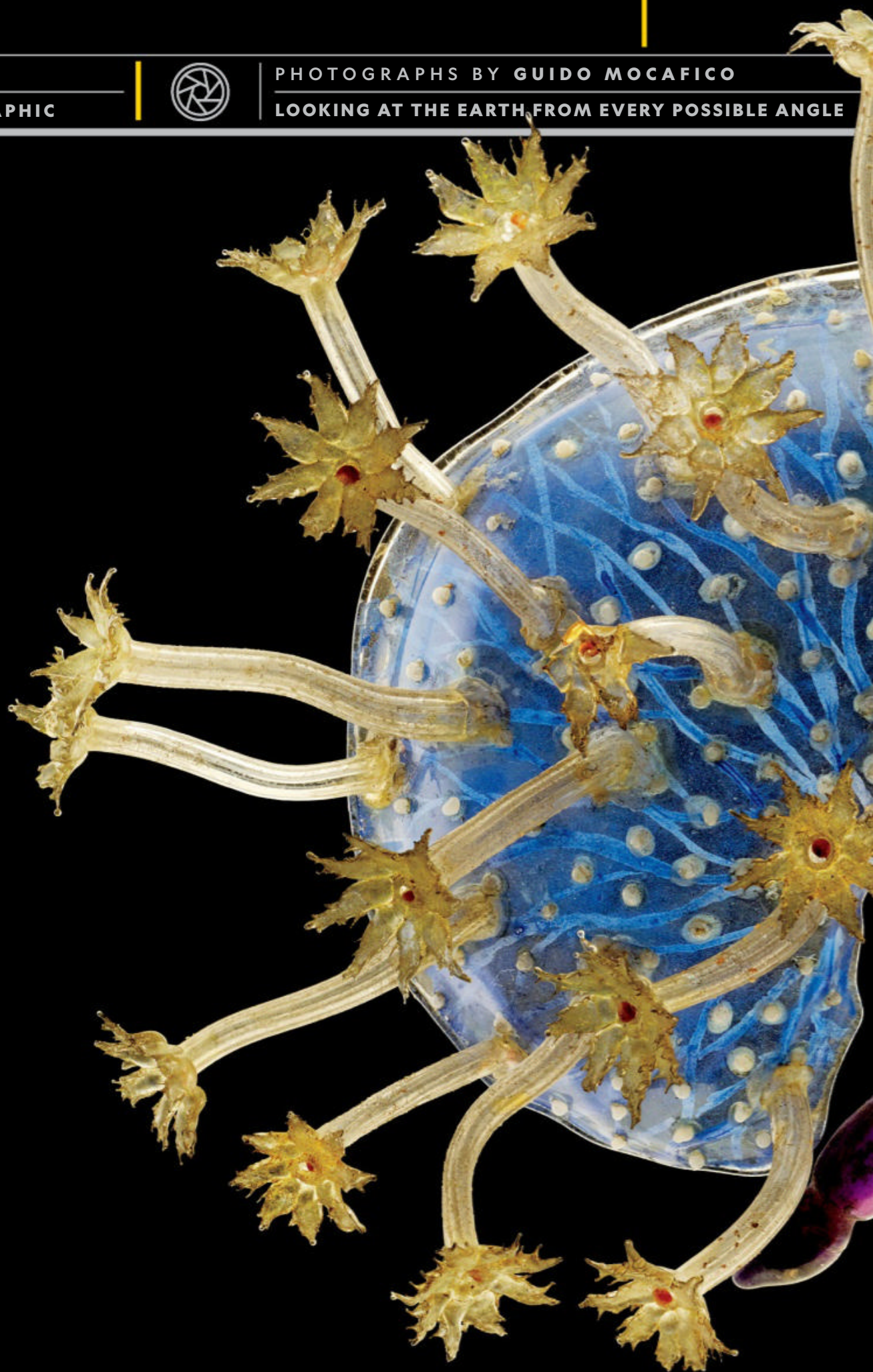
VOL. 239 NO. 6

NATIONAL GEOGRAPHIC



PHOTOGRAPHS BY GUIDO MOCAFICO

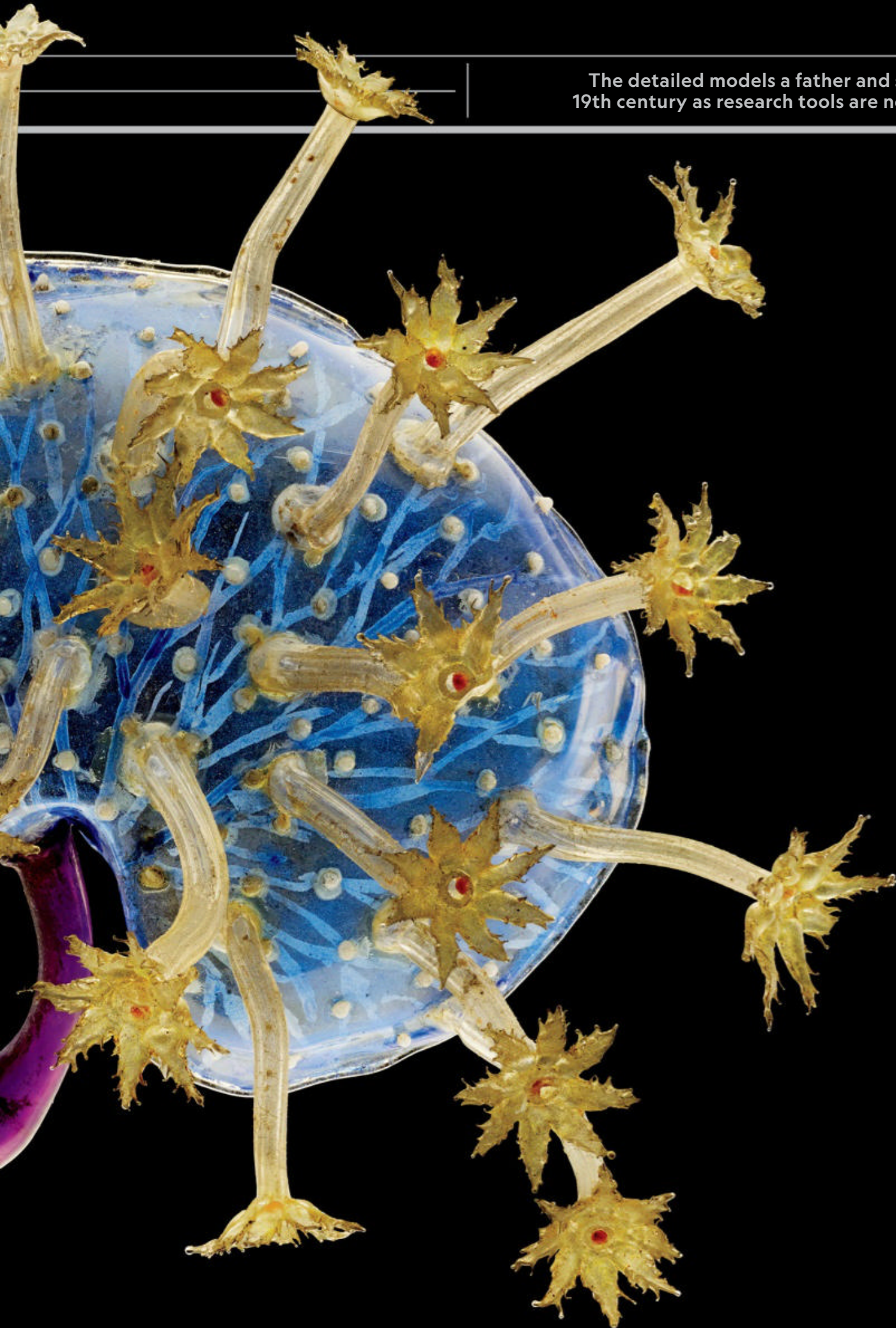
LOOKING AT THE EARTH FROM EVERY POSSIBLE ANGLE



Gifted glass artists Leopold and Rudolf Blaschka made models of sea life from 1863 to 1890. This one is identified as *Renilla muelleri*, a type of sea pansy.

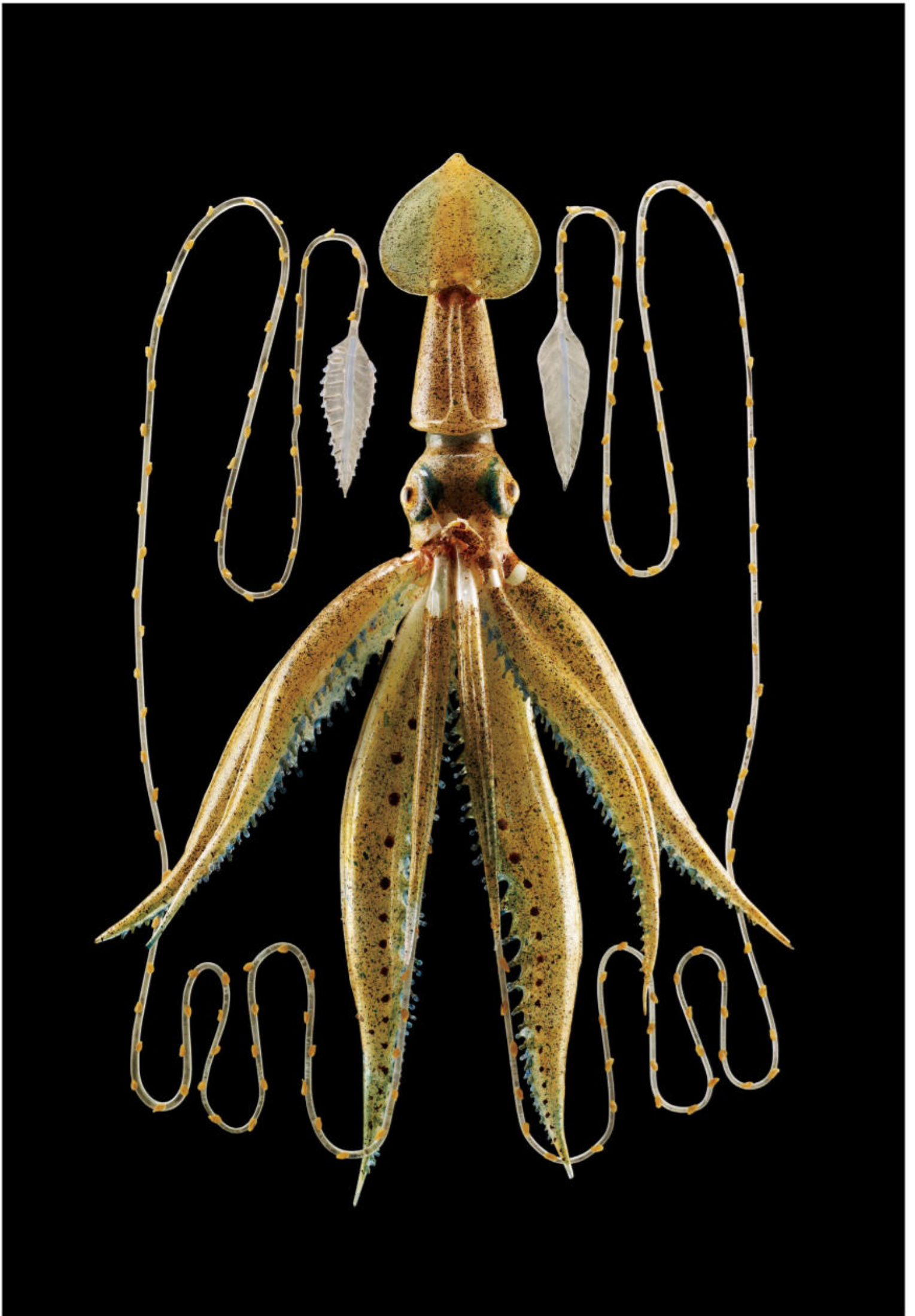
A GLASS SEA MENAGERIE

The detailed models a father and son made in the 19th century as research tools are now in museums.





Clockwise from top left: The Blaschkas made *Chrysaora hysoscella* (compass jellyfish), *Rhizostoma pulmo* (barrel jellyfish), *Pelagia noctiluca* (mauve stinger), and *Lymnorea triedra* (a variety of medusa).



Techniques Leopold Blaschka developed and learned from his forebears are on display in intricate glass-work like this. He called it *Enoploteuthis veranii*, a cephalopod that was found in the Mediterranean Sea.



The Blaschkas' glass model of *Caliphylla mediterranea*, a kind of sea slug, was in the National Museum of Ireland's natural history collection when Mocafico photographed it.



The *Corallium rubrum* that the Blaschkas replicated in glass is also known as red coral or precious coral. Mocařico photographed it at the University Museum Utrecht in the Netherlands.

THE BACKSTORY

THESE SEA CREATURES WERE FASHIONED TO BE RESEARCH AIDS. NOW THEY'RE THE STARS OF STILL LIFE PHOTOGRAPHS.

FOR STILL LIFE MASTER Guido Mocafico, it's been a years-long quest: to find and photograph a menagerie of century-old glass sea creatures, scattered among institutions and museums worldwide.

The sculptures are the work of Czech glassworkers Leopold Blaschka and his son Rudolf. From 1863 to 1890 the men crafted nearly 10,000 models of 700 species of octopuses, jellyfish, anemones, and more.

Fascination with natural history, particularly the sea, exploded in the mid-19th century—but sea creatures were difficult to obtain and preserve. The Blaschkas' lifelike models were in demand not only as teaching tools but also as objects of art.

Descended from a family of glass

artists, Leopold could create tendrils like silk strands and polyps like dew-drops. His specific techniques used with the glass creatures have never been fully replicated. To make the sea creatures anatomically accurate, the Blaschkas worked from illustrations, specimens, and later live creatures kept in home aquariums.

Some sculptures that first were study aids under lamplight are still used by educators today. But obsolescence relegated many to storage until they were rediscovered for their unique artistry and displayed in collections and museums. Once he tracked down the specimens, Mocafico used photography to awaken and enliven them, radiant in a black sea. —NATASHA DALY



The Blaschkas made this flamboyant-looking creature, said to be in the *Glaucus* genus of sea slugs.



Dear Fermi: A Fan Letter

MY FAVORITE SPACECRAFT? THE FERMI GAMMA-RAY SPACE TELESCOPE, WHICH CAPTURES A COSMOS SO DIFFERENT FROM WHAT OUR EYES SEE.

BY LIZ KRUESI

I

IN THE SUMMERS OF MY CHILDHOOD, I spent time in upstate New York at my grandparents' lakeside home, far from the polluting light of big cities. At night, I would pull a blanket from my bed and drag it down the pine needle-covered path from the house to the boat dock. Stretched out there, I would gaze at the star-filled sky for as long as the grown-ups allowed. I didn't have words for what I was feeling: the pull of the cosmos, beautiful and awe-inspiring.

Fast-forward more than a decade to summer 2002, when I first learned of astronomy in the extreme, energetic and exciting. I was a summer intern at the University of Chicago, an institution known for its physics pioneers. Among them: Enrico Fermi, who spent the last years of his life and career there.

At UChicago, I rehabbed equipment designed to detect cosmic rays, the high-energy protons and other nuclei that bombard us from space. I learned of gamma rays—the most energetic form of light—and

how detecting them takes creativity, innovation, and observatories lofted into space. I was hooked. Six years later, just such an observatory launched from Florida atop a Delta II rocket and into orbit around Earth. Named for Fermi, it's become my favorite spacecraft.

The Fermi Gamma-ray Space Telescope has shown me a universe I could never have dreamed, a brilliant, violent realm buzzing with beauty and movement. Fermi sees a cosmos so different from what my eyes capture—a stunning departure from the visible light emitted by the screen in my hand and the screen on my wall and the screen on my desk.

Each bit of gamma-ray light Fermi captures holds thousands to billions of times more energy than the light human eyes can see. Those gamma rays contain the secrets of the most remarkable things in the universe: spiraling matter feeding black holes and the leftovers of massive, exploded stars. These events and motions spew light with so much energy that few phenomena on Earth can replicate it. It's foreign to humans, to everything we can see and touch.

Scientists sent Fermi into space with two instruments to capture these gamma rays. Their target for the mission was five years; their optimistic goal, a decade. As of this month, Fermi has spent 13 years revealing celestial explosions and collisions.

ONE OF FERMI'S serendipitous discoveries was made within its first year aloft. The telescope spied two enormous gamma-ray bubbles, orbs of charged particles that our Milky Way has been blowing from its center for millions of years. The massive structures, each extending 25,000 light-years tall, likely tell the tale of some cataclysmic activity long ago. But their specific cause remains a mystery.

Another Fermi discovery answered a century-old question about the sources of cosmic rays. In August 1912, in a hot-air balloon more than three miles aboveground, physicist Victor Hess became the first to detect cosmic ray particles—a feat for which he shared a Nobel Prize. Yet after decades more work, neither Hess nor others had determined the cause of cosmic rays. These particles are electrically charged, and thus they're deflected by galaxies' magnetic fields. Their paths are random and confused.

Enter Fermi's impressive gaze. The events that spawn cosmic rays also create distinct gamma rays. Fermi's eyes led us straight back to the sites of former stellar explosions and the cause of cosmic rays. This detection confirmed suspicions that these exploding stars and their turbulent environs can accelerate protons and other atomic nuclei—making cosmic rays.

The light Fermi sees is so energetic that traditional optics don't—can't—apply. This observatory doesn't use reflective mirrors, like the James Webb Space Telescope that will launch later this year, or refracting lenses that bend and focus incoming radiation. Instead, it is a particle detector orbiting Earth: Its main instrument is a tungsten-silicon tiramisu about the size of a large garden shed.

Fermi at Work

The Fermi telescope captures the glow of gamma rays.

RIGHT: Galaxy Centaurus A hosts an enormous black hole dining on nearby matter. During this messy and lengthy meal, the turmoil launches jets of fast-moving material. Those jets emit both radio waves, which are the lowest-energy type of light and appear yellow-orange here, and gamma rays, the highest-energy radiation and appear purple here.

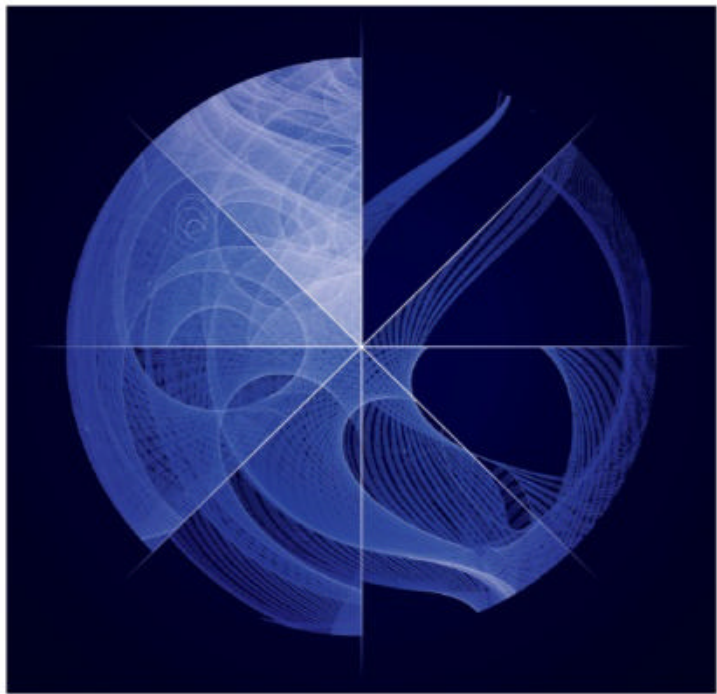
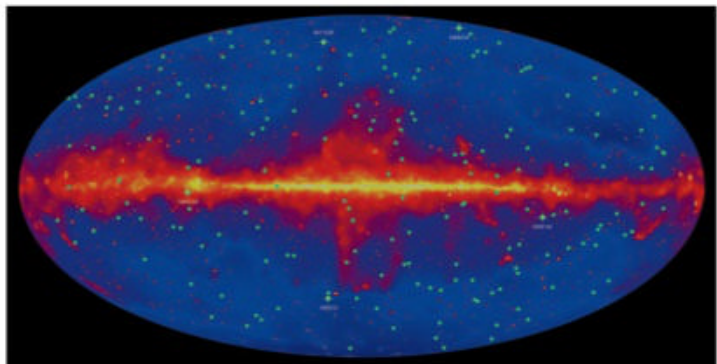
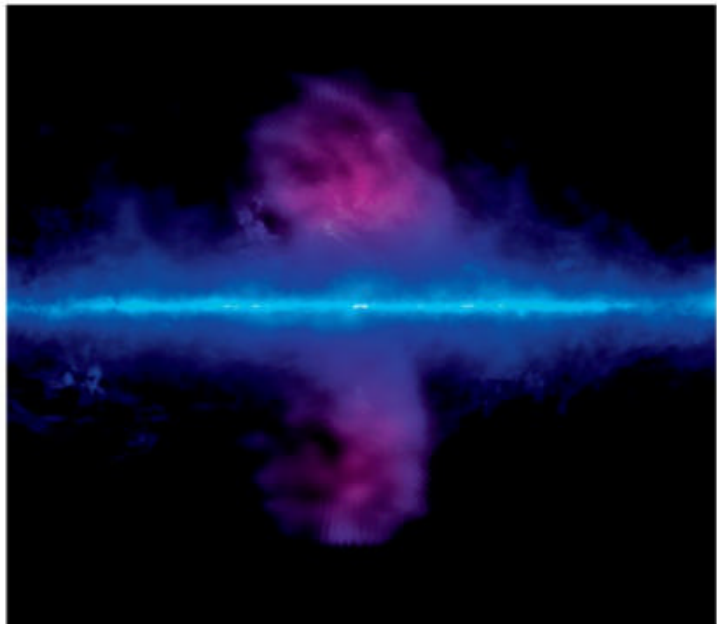
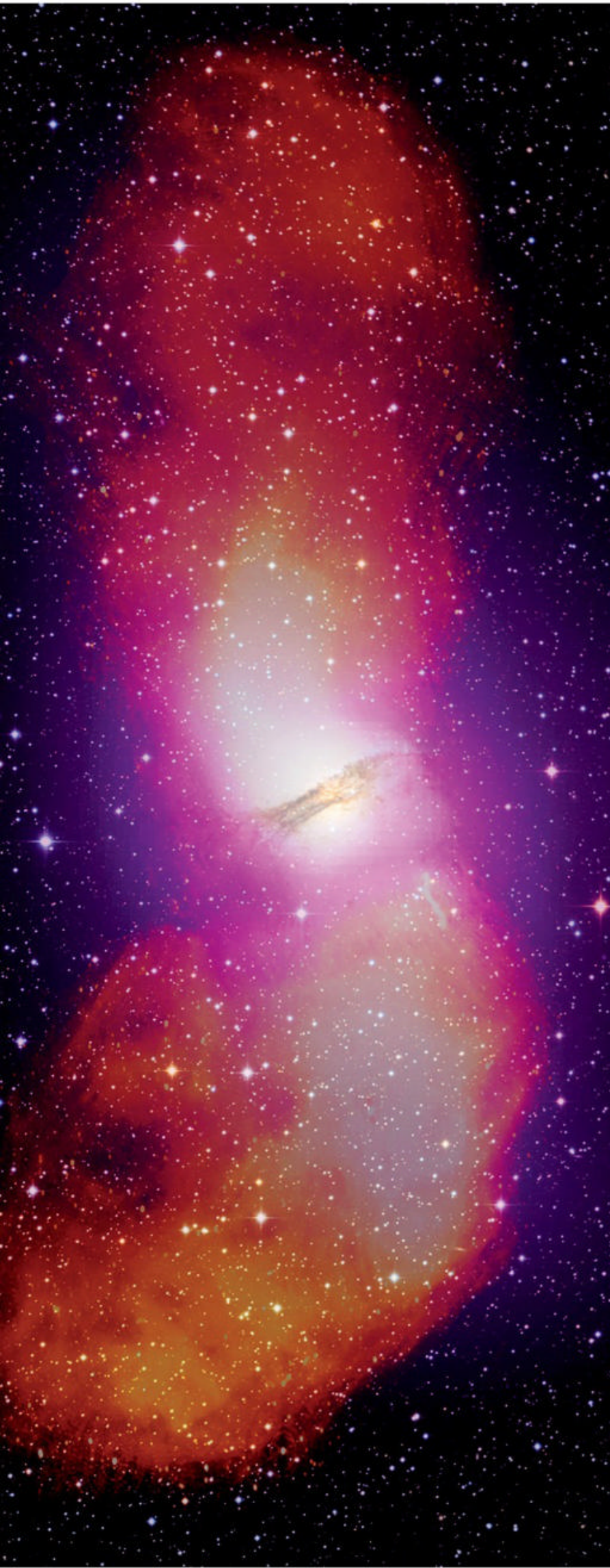
FAR RIGHT, FROM TOP: Early in its mission, Fermi discovered two enormous bubbles of gamma rays (purple) emanating from the center of our galaxy (seen as a blue plane).

Cassiopeia A is the site of a past star explosion. The magenta ball shows where gamma rays originate in the star remnant.

This map combines Fermi's all-sky gamma ray vision and the brightest 186 gamma-ray bursts it has seen (green dots).

Fermi rolls and rocks in its orbit about Earth. This image, made of eight frames moving clockwise over 51 months while viewing the same crushed star core, traces the spacecraft's complex motion. —LK





IMAGES, CLOCKWISE FROM LEFT: NASA/DOE/FERMI LAT COLLABORATION, CAPELLA OBSERVATORY, AND ILANA FEAIN, TIM CORNWELL, AND RON EKERS (CSIRO/ATNF), R. MORGANTI (ASTRON), AND N. JUNKES (MPIFR); NASA/DOE/FERMI LAT COLLABORATION; NASA GODDARD; NASA/DOE/FERMI LAT COLLABORATION (TWO)

The Large Area Telescope (LAT), Fermi’s workhorse instrument, looks at about a fifth of the night sky at a time and pinpoints a gamma-ray source to an area the size of a grain of sand held at arm’s length. With it, Fermi has mapped thousands of objects emitting gamma rays, from the extreme environs around black holes to stars’ explosive demises.

As gamma rays pass through the LAT’s tungsten layers, the material coerces some to split into an electron and its antimatter counterpart, a positron. Alternating layers of silicon track those charged daughter particles as they pass through; at the LAT’s base, a third component absorbs these particles and measures their energies. In just seconds, Fermi’s computer puts all that information together to reconstruct a gamma ray’s energy and direction—which tells us where that light came from.

Meanwhile, Fermi’s other instrument, 14 smaller particle detectors working in unison, senses the whole sky (except for where Earth blocks the view) on the hunt for distant flashes called gamma-ray bursts. If two or more of the detectors on this instrument—the Gamma-ray Burst Monitor (GBM)—sense one such spike of gamma rays, Fermi’s computer systems can alert astronomers back on Earth to the fireworks.

This all-sky ability is what makes Fermi indispensable. It was made to scour a sky that never rests, to witness stars’ deaths and the massive shock waves that energize the universe’s particles. And that immense visibility also has connected astronomers to another type of signal—one that wasn’t part of Fermi’s original plan because none had yet been seen.

FERMI’S GREATEST FEAT to date came nearly a decade after it launched, once astronomers employed another type of detector: giant land-based facilities that could feel gravitational waves, or ripples in space-time itself.

On that morning in August 2017, Fermi’s GBM sensed a brief but brilliant flash of gamma rays and alerted astronomers on Earth. Just 1.7 seconds before, the detectors known as LIGO and Virgo had felt gravitational waves’ near-imperceptible tug passing through. Fermi, LIGO, and Virgo alerted astronomers across the globe, who then put visible-light telescopes, x-ray satellites, and radio arrays to work. In concert, they confirmed the signals all came from the same event. After further analysis, researchers had a robust picture of what had happened: The gravitational ripples and the full spectrum of light came from a

FERMI WAS MADE TO SCOUR
A SKY THAT NEVER RESTS,
TO WITNESS STARS’ DEATHS
AND THE MASSIVE SHOCK
WAVES THAT ENERGIZE THE
UNIVERSE’S PARTICLES.

long-ago collision between two ultra-dense stellar leftovers called neutron stars. In finding that gamma-ray burst, Fermi had connected these gravity signals, a new type of messenger carrying information about celestial objects, to different types of light. If gravitational waves are a new window to the universe, Fermi provided the blueprints; it showed the context of how that window connects to what we know.

Starting its 10th year on duty, Fermi became “the premier space observatory for multi-messenger science,” says Fermi scientist Adam Goldstein. In fact, it’s become essential. There is no replacement on the schedule at NASA; only smaller, short-lived missions that will assume portions of Fermi’s watch as a crucial counterpart of the gravitational wave detectors on the ground.

Shortly after the 2017 discovery, Julie McEnery, then Fermi project scientist, said this: “What we’re really seeing is a whole new era for Fermi.” That era might last for years; Fermi runs on solar power, so as long as its panels continue collecting light and its positioning drives remain healthy, it will continue to reveal the gamma-ray sky.

This is what we should hope for, because no other telescope does what Fermi does. It bridges the divide between light (from the stars we’ve known since childhood) and gravitational waves, this new type of messenger. Fermi has shown us—shown me—so much about our sensational, enthralling, ever changing cosmos. It has changed how I see the universe. □

Liz Kruesi is a freelance science journalist focusing on cosmology and astronomy, with a fondness for the high-energy universe. This essay was adapted from *nationalgeographic.com*’s Dear Spacecraft series, in which we ask writers, scientists, and astronomy enthusiasts to share why they feel personally connected to robotic space explorers.



- Launch vehicle
United Launch Alliance Delta II rocket
- Agency
NASA
- Launch date
June 11, 2008
- Launch mass
9,487 pounds (4,303 kg)
- Power source
3,122-watt pair of solar arrays
- Orbit
95 minutes around Earth

Fermi Facts

The Gamma-ray Large Area Space Telescope (GLAST) was launched 13 years ago to map the high-energy sky. Two months after launch, scientists renamed it the Fermi Gamma-ray Space Telescope—“Fermi” for short.

 **PURINA**[®]
PRO PLAN[®]

THE POWER TO REDUCE ALLERGENS IN CAT HAIR & DANDER

Purina trademarks are owned by Société des Produits Nestlé S.A. Any other marks are property of their respective owners.



47%

Shown to reduce the major allergen by an average of 47%, starting in the third week of daily feeding



Breakthrough nutrition discovered through over a decade of research



The key ingredient is a specific protein from eggs

 **PURINA**[®]

Your Pet, Our Passion.[®]

Exclusively at Pet Specialty and Online Retailers

Learn more at ProPlan.com/LiveClear

A KING'S CURIOUS COLORS

PHOTOGRAPH BY
YVES ADAMS

Amid the black-tuxedoed throngs of king penguins on South Georgia island, this one's yellow and beige plumage may look freakish. But animals with missing pigmentation, a condition called leucism, aren't vanishingly rare: It occurs in one out of every 20,000 gentoo penguins, for example. Though the coloration makes for a stunning photo, standing out could hinder the bird's ability to find a mate and heighten its risk of being gobbled up by an orca or a leopard seal.

—JASON BITTEL



TRUTH ABOUT WEIGHT®
The cycle can be broken

Enlightened

**BECAUSE I FINALLY KNOW THE
TRUTH ABOUT WEIGHT**

*Losing weight and keeping it off
is hard because of how my body
reacts to weight loss. Making a
weight-management plan with my
health care provider is important
to my success—and adding a
prescription medicine can help me
lose weight and maintain it!*

***Get the truth today—so you
can do something about it***

Learn more at
TruthAboutWeight.com



Truth About Weight® and Novo Nordisk are
registered trademarks of Novo Nordisk A/S.
©2021 Novo Nordisk Printed in the U.S.A.
US200B00266 January 2021

DISPATCHES
FROM THE FRONT LINES
OF SCIENCE
AND INNOVATION

Not crushed like a bug
The diabolical ironclad beetle seems aptly named: The exoskeleton of the nearly inch-long insect is so strong that it can withstand a force of almost 40,000 times its weight. The U.S. Air Force is funding research on the beetle's armor to gain insights for developing new materials. —HW



SUSTAINABLE EATING

A SIDE OF CRISP SEAWEED

THIS 'BACON OF THE SEA' DELIVERS PLENTIFUL PROTEIN WITH A SPLASH (INSTEAD OF AN OINK).

AQUACULTURISTS IN OREGON are developing a specialty food industry centered on a marine alga that's been called "the most productive protein source on Earth," "the superfood of the future," and—intriguing to many people—"bacon of the sea." Dulse (rhymes with "pulse") is a seaweed found in the northern Atlantic and Pacific Oceans. Northern Europeans have eaten it for centuries; most Americans haven't tried it or even heard of it. Oregon State University researchers patented a strain that can be grown in tanks on land using only seawater and sunlight—all while absorbing carbon dioxide in the course of photosynthesis. As a food product, dulse's benefits are several. It grows rapidly. It's rich in vitamins, minerals, antioxidants, and protein. And some say that when strips are smoked and fried, it does taste like bacon (with which it's plated above). Chuck Toombs's company farms dulse on the Oregon coast and sells it fresh to restaurants and dried in stores. "People are demanding more plant protein," Toombs told Oregon Public Broadcasting. "And we're going to be able to supply that." —HICKS WOGAN

BIOTECHNOLOGY

Lab-grown jaw relief?

There's promising news for millions with temporomandibular joint (TMJ) ailments that lead to jaw pain. In a study with pigs, which have jaw structures similar to human jaws, scientists produced and implanted cartilage-bone grafts grown with stem cells. Six months later, the joints showed regeneration and had borne the pressures of chewing. Planned next: a clinical trial with a few human patients. —HW



GET OUT WHAT YOU PUT IN



We built our new **CROSSROADS® BAGS** the same way we build everything else—for the wild. With expedition-grade **TUFFSKIN™ NYLON** and an easy-to-clean **GROUNDCONTROL™ BASE**, your only worry is where to go next.

YETI BAGS

TUNNEL VISION

Slot canyons and rock cliffs define the water-whittled landscape of

SHEER MAGIC

Adventurers seeking otherworldly realms should aim their sights on a slot canyon called the Subway. Getting to this permit-required wonder is half the fun (and challenge). There are two ways: by hiking nine miles round-trip or by canyoneering, a mix of hiking, rappelling, and other activities. For this image, photographer Josh Hydeman did the latter. “By the time we got there, it was late in the day,” he says. “The canyon looked like a cave. There was a meeting of light and color and moment and beauty.”

LOW AND WET TO HIGH AND DRY

Zion is “riddled with narrow, dark, beautiful canyons filled with water,” says Hydeman. One of the best examples is the Narrows, a favorite of hikers who are prepared to get wet. For other visitors, the park offers wheelchair-accessible trails, wildlife-watching, and stargazing. Rock climbers test their mettle on some of the tallest sandstone cliffs in the world. While ascending, they can also track sightings of bats, helping scientists to protect these keystone species.

THE KEEPERS

Water not only sculpted the terrain but, starting over 10,000 years ago, helped lure humans—the Fremont, ancestral Puebloan, and Archaic peoples. Some carved images on the walls and made their homes in the cliffs. Arriving no later than the 13th century, the Southern Paiute called this area Mukuntuweap, or “like a straight arrow.” Settler encroachment forced them out, but new generations have returned to gather together and honor the land. The park’s Human History Museum tells their stories.

'EVERY PILGRIMAGE TO
THE DESERT IS A PILGRIMAGE
TO THE SELF. THERE IS
NO PLACE TO HIDE, AND SO
WE ARE FOUND.'

—Terry Tempest Williams, author

southwestern Utah's Zion National Park.

BY THE NUMBERS

80

PERMITS RELEASED PER DAY FOR THE
SUBWAY SLOT CANYON, SHOWN HERE

10,000

AGE, IN YEARS, OF EARLIEST KNOWN
HUMAN ARTIFACTS FOUND IN ZION

148,732

SIZE OF THE PARK, IN ACRES

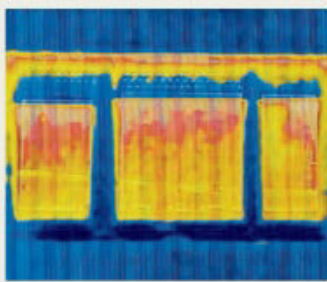
UTAH

ZION N.P.

BY NORIE QUINTOS PHOTOGRAPH BY JOSH HYDEMAN

 PLANET
POSSIBLE

For more stories about how
to help the planet, go to
natgeo.com/planet



1

HOME ENERGY**Don't Lose Your Cool**

Feeling the heat even when your cooling system is on? Take a look at your windows. Seal any cracks around the edges with caulk or weather stripping, to keep cooled air from escaping. And consider insulated cellular—or honeycomb—shades, which can reduce solar heat coming through the windows by up to 80 percent. More tips: energy.gov/energysaver/heat-and-cool

**SAFER WATER**

A 2017 ANALYSIS FOUND 26 DIFFERENT DRUGS IN SAMPLES OF DRINKING WATER FROM ACROSS THE UNITED STATES. DON'T FLUSH OR TOSS MEDICATIONS; FIND A DIRECTORY OF SAFE DISPOSAL SPOTS AT SAFE.PHARMACY/DRUG-DISPOSAL

Want cleaner water? Two ways to help. Want to cut waste? Three more ideas. Now it's in your hands.

BY CHRISTINA NUNEZ

BUY LESS**There's a Fix for That**

You don't have to be handy to salvage broken appliances or furniture. Groups around the world convene to restore items in disrepair, to keep them out of landfills. Most meetups are on hold for now, but some have gone virtual. fixitclinic.org

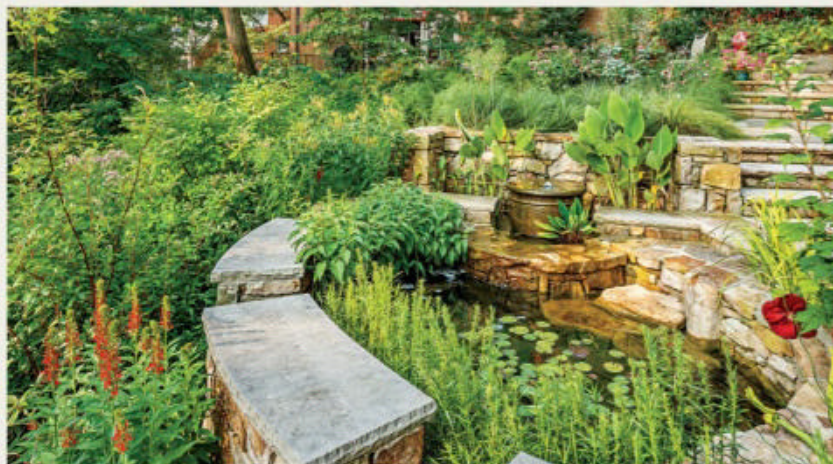


4

SKIP PLASTIC**BETTER BAGGIES**

All those plastic sacks for snacks and leftovers join more than 10 million tons of packaging headed to landfills each year. You'll find plenty of reusable alternatives made of silicone, fabric, and other materials. stasherbag.com

5

**IN THE YARD**

Unchecked storm runoff carries motor oil, debris, and pesticides into waterways. Rain gardens collect excess water, letting the ground filter it. epa.gov/soakuptherain

WHAT IS AVAXHOME?

AVAXHOME-

the biggest Internet portal,
providing you various content:
brand new books, trending movies,
fresh magazines, hot games,
recent software, latest music releases.

Unlimited satisfaction one low price
Cheap constant access to piping hot media
Protect your downloadings from Big brother
Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages
Brand new content
One site

AVXLIVE • ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>

FLIP FLIP HOORAY!

A perfect symbol of fun in the sun for only \$79

Here's a memorable beach moment: You're basking in the warm sun, toes in the sand, letting the gentle turn of the foam-capped waves lull you into a state of complete relaxation. As your eyes scan the endless horizon of blue on blue, you're rewarded with a school of dolphins making their way across the sea. There's no denying their signature shape as they leap from the water. If you don't see anything else extraordinary the rest of the day, you can take solace knowing you've witnessed one of nature's most playful and intelligent creatures in their natural habitat.

Why not re-create that special toes-in-the-sand moment with our **Blue Topaz Dolphin Pendant?** The beloved sea mammal has been captured mid-jump in sterling silver. And, tucked into its fins is a full two carats of shimmering blue topaz.

Nothing captures the shimmering color of the ocean in the midday sun like blue topaz. With its sparkling clear blue color and high refractive index, blue topaz is one of the top-selling blue gemstones. And with our special price, you have quite the catch.

Satisfaction guaranteed or your money back. Enjoy the **Blue Topaz Dolphin Pendant** for 30 days. If it doesn't pass the test swimmingly, send it back for a full refund of the item price.

Limited Reserves. A full two carats of genuine blue topaz set in sterling silver for this price is as rare as a dolphin sighting. We cannot guarantee availability for long. Call today!

Limited to the first 1800 responders to this ad only!

Blue Topaz Dolphin Collection

A. Pendant (2 1/2 ctw)~~\$395~~ † \$79 + S&P Save \$316

18" Sterling Silver Rope Chain \$59

B. Earrings (2 3/5 ctw).....~~\$395~~ † \$99 + S&P Save \$296

C. Ring (2 1/4 ctw)~~\$395~~ † \$99 + S&P Save \$296

Pendant, Chain, & Earrings Set ~~\$849~~ \$199 + S&P Save \$650

**BEST
CHOICE**

You must use the insider offer code to get our special price.

1-800-333-2045

Your Insider Offer Code: DPP310-04



"This sterling silver dolphin is absolutely beautiful and the blue topaz is like the color of the ocean"

— Vivian, Cabool, MO

† Special price only for customers using the offer code versus the price on Stauer.com without your offer code.

Stauer® 14101 Southcross Drive W., Ste 155, Dept. DPP310-04,
Burnsville, Minnesota 55337 **www.stauer.com**

- Pendant- 2 ctw blue topaz; 1/2 ctw Ultimate Diamond Alternative®, DiamondAura®
- .925 sterling silver setting

Stauer... *Afford the Extraordinary.®*

*A full two carats
of shimmering
blue topaz set in
sterling silver*



Jewelry shown is
not exact size.



Rating of A+



THESE CREATURES COME WITH SPECIALIZED STORAGE

ENGLISH BIOLOGICAL anthropologist Alice Roberts had so often ridiculed the human form's shortcomings that in 2018 a colleague gave her this challenge: Redesign the body by improving upon its parts. Finding inspiration in nonhuman species, Roberts speculated that we might be better off with some of their features, including the marsupial's pouch.

No human mother will be pocketing her little Joey like a joey anytime soon, but many animals—and not just marsupials—have vital uses for their built-in storage containers. Here are five. —HICKS WOGAN

2.



3.



4.



5.



1.

1. SEAHORSE

He does the hard labor

In seahorse couples, the female deposits her eggs into the male, which holds them in a frontal compartment called a brood pouch. After 14 to 28 days, he delivers up to 1,500 fry in a water birth.

2. SEA OTTER

Storage for snacks

Under their forearms, sea otters have pockets of loose skin. There they can keep a favorite rock they use for cracking open shellfish and stash food they've gathered but want to eat later.

3. ECHIDNA

Snuggling till it hurts

A female echidna protects her egg turned newborn puggle—yes, that's the term for offspring—in a temporary pouch formed by contracted abdominal muscles. The puggle remains there until the sharp spines on its body develop.

4. WOMBAT

Evolved for tidiness

Like females of other marsupial species, the wombat has a pouch where her young begin life. Unlike others, though, the pouch at her midsection opens toward her rear so that her digging won't fill the pouch—and shower her offspring—with dirt.

5. CHIPMUNK

Cheeks as grocery bags

One of the smallest members of the squirrel family, the chipmunk can stuff its cheeks with food until they're almost as large as its body. To survive the winter, it eats from the stockpile carried to its burrow this way.

LITTLE PACKAGE,
LOTS OF FLAVOR—
just like me!



Try our
NEW PATE
recipes



BENEFUL INCREDIBITES WET RECIPES

Great flavor and nutrition all in one package.

-  Made with delicious real beef, chicken or salmon
-  No artificial flavors, colors or preservatives
-  High-protein recipes specially formulated for small dogs

Learn more at [Beneful.com/IncrediBites](https://www.beneful.com/incredibites)

Purina trademarks are owned by Société des Produits Nestlé S.A.

HEALTHFUL.
FLAVORFUL.
PURINA
— **Beneful** —



Your Pet, Our Passion.®

BAKING IN POMPEII

In A.D. 79 the eruption of Mount Vesuvius buried the Roman cities of Pompeii and Herculaneum in ash and pumice, and carbonized many of their organic contents—including the bread in Pompeii's bakeries. Farrell Monaco, a culinary archaeologist, researched one popular bread's history and has re-created the recipe. —ANNIE ROTH

1

Panis quadratus

In a Pompeii bakery they excavated, archaeologists found an oven full of charcoal-like loaves of this bread. It was named for the four indentations made with a string or reed so the loaf would more easily break into portions.

2

Leavens (starters)

The region's bakers sometimes used leavens to incorporate live yeast into their bread dough. Unlike today's typical starters of flour and water, those used by ancient Roman bakers often contained legumes or grape skins to boost fermentation.

A recipe for the bread seen here is at ngm.com/jun2021.



3

Ancient grains

Triticum aestivum, bread wheat, was found alongside panis quadratus loaves during bakery excavations in Pompeii. As the Roman Empire grew, wheat became the main grain for baking.

4

On the table

Dense, with a crunchy crust, the bread is ideal for soaking up wine, soups, and sauces, says Monaco. She grinds grain with a stone hand mill (top right) to match the coarseness of ancient Romans' flour.



HAVE YOU
ROLLED OVER?

CHANGE THE WORLD WITH YOUR IRA ROLLOVER

If you are at least 70 1/2 years old, you can transfer up to \$100,000 directly to the National Geographic Society from a traditional IRA without paying income tax on the withdrawal—and help you meet your required minimum distribution. Your gift will help us make a lasting impact in the fields of science, exploration, education, and storytelling.

To discuss your IRA charitable rollover, simply notify your IRA administrator or access our free estate planning tool at www.givingdocs.com/national-geographic/

Contact us for further information toll free at (800) 226-4438 or email us at legacy@ngs.org

THE NATIONAL GEOGRAPHIC SOCIETY IS A 501(C)(3) NONPROFIT ORGANIZATION
OUR FEDERAL TAX ID NUMBER IS 53-0193519

PHOTOGRAPH COURTESY OF MICHAEL NICHOLS

21PGAD06





BY MICHELE L. NORRIS
PHOTOGRAPHS BY WAYNE LAWRENCE

HIDDEN THOUGHTS ON RACE IN SIX WORDS

When MICHELE L. NORRIS first asked strangers to sum up their feelings about race in just six words, she assumed few people would want to share their personal reflections on such a sensitive topic. Now, after more than half a million responses to the Race Card Project, she knows better.



RECKONING WITH THE PAST

'HE'S
MY DAD,
NOT THE
GARDENER'

Kelly Stuart-Johnson holds a photo from 1995 of her mother and stepfather. The six words she submitted to the Race Card Project hint at how race often leads to false assumptions.







**KELLY
STUART-
JOHNSON**

**'HE'S
MY
DAD,
NOT
THE
GARDENER'**

**Brooklyn,
New York**

KELLY STUART-JOHNSON'S daughter Tandy June comes face-to-face with Alfred Brown, Jr., the stepfather Stuart-Johnson considers her true father. When she was a child, she wished for her own room and a backyard with a swing. Brown took a second job and moved the family to a bigger home. A few years ago someone pointed to a picture of her childhood home and asked whether the Black man pulling weeds was the gardener. "I was so angry at the implication of the assumption," she wrote. And yet she was grateful for the chance to publicly claim Brown "as the man who made me who I am."

T

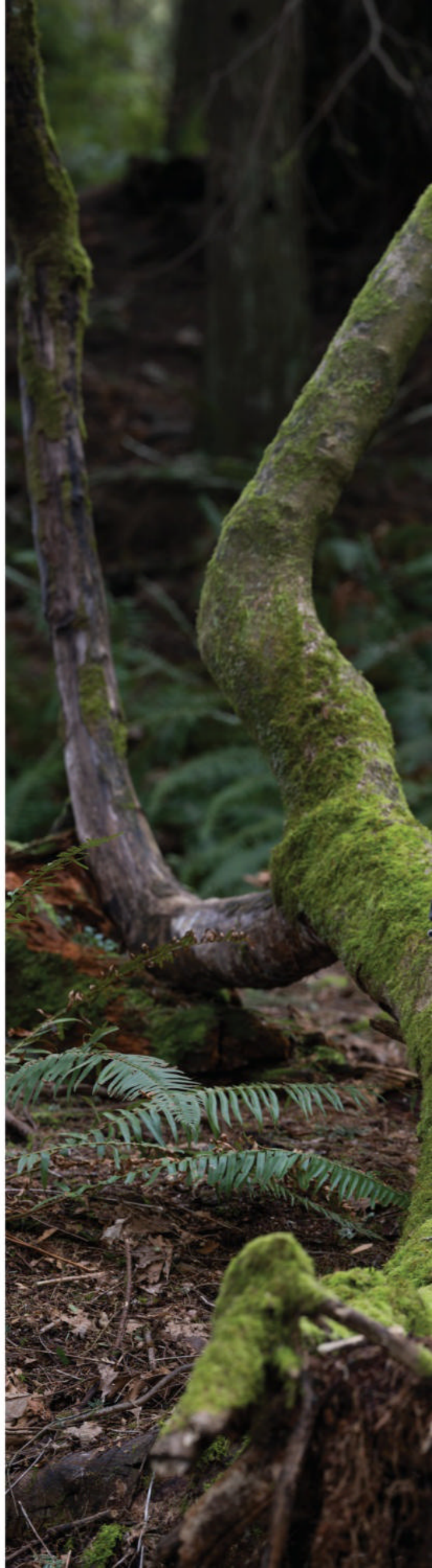
THE MOST INTERESTING, most revealing, most honest, and gravest conversations about race are the ones we typically never get to hear, because they percolate in private spaces. In the locker room or the bedroom. At the kitchen table or during a smoke break outside the factory. The conversations people have with themselves in their own head while brushing their teeth or driving to work.

The rise of social media platforms such as Twitter, Facebook, and Parler have created new windows to peer at our consternation about race. But even with that relatively new gust of candor, there is still roiling terrain that our computer and phone screens cannot reliably reach. There are still self-imposed filters that often keep people from posting their innermost questions or laments in an open forum for the world to see.

That terrain is difficult to traverse as a stranger, and yet I've spent more than 10 years doing just that, thanks to a simple project I started in the attic of my house. I had written a memoir about my family's complex racial legacy, and I was setting off on a 35-city book tour back in the days when that kind of travel was still possible. I was nervous for all kinds of reasons, but mainly because I knew I was going to be facing



 **The National Geographic Society**, committed to illuminating and protecting the wonder of our world, has funded journalist and National Geographic Explorer Michele L. Norris's work to encourage honest conversations about race.





**GENE
TAGABAN**

**‘NATIVE
AMERICANS,
AMERICA’S
INVISIBLE
INVISIBLE
INVISIBLE’**

**Ruston,
Washington**

**“WE ARE
NOT BEING**

acknowledged on our own lands, our own continents, our own territories and in the history books ... but here we are, the invisible peoples,” says Gene Tagaban, 56, of Ruston, Washington. Tagaban, whose Tlingit name is Guuy Yaau, is Cherokee, Tlingit, and Filipino. He strives to keep his people’s ancestral wisdom and history alive through story-telling, mentoring, healing, and learning.

audiences in bookstores and big theaters across the United States, asking them to engage in conversations about race.

You see, a decade ago I was convinced that Americans would rather jump off a cliff than have an honest or personal conversation about race in public. As it turned out, I was wrong.

In an attempt to create an entry point for a difficult conversation, I began asking people to think about the word “race” and then take whatever popped into their mind and reduce that thought, memory, anthem, or question into one sentence with just six words.

I printed postcards that read “Race. Your thoughts. 6 words. Please Send.” and distributed them everywhere I went. I had no idea that years later I’d find myself awash in a tidal wave of every kind of emotion as the stories found their way into my mailbox, and eventually into my in-box after the small team I assembled created a website and invited people to submit their stories via the internet.

I had no idea that what I was actually creating was a taproot that would carry me into people’s most private spaces, to towns I’d never heard of, countries I’d never visited, and cultures that were both foreign and familiar. I had no idea there were so many people who were so eager to talk about race and identity that they would share their thoughts with a stranger, knowing that their stories could be posted on a website for anyone to see.

TOO BLACK FOR BLACK MEN’S LOVE

DID MY SOUTHERN GRANDPA
ATTEND LYNCHINGS?

THAT’S FUNNY, YOU DON’T LOOK JEWISH

WHEN WE BEGAN collecting stories digitally (and not just through postcards), we included an additional prompt to the form for submitting six-word stories online. It was a simple query before hitting the send button: “Anything else to say?” That was like turning the spigot on full blast. People went well beyond six words, providing backstories that ranged from a few sentences to long, deep, and revealing essays.

There’s the Ohio man who has spent most of his life as the only African American in the room at school and at work. He said he was seen as “safe” and “nonthreatening” but says he is secretly “full of rage.”

Or the woman who grew up in Colorado and was told never to speak about her grandmother’s Choctaw heritage for fear that she would be reported and sent away to live on a reservation. Her grandmother was a proud woman who, despite the hatred and discrimination in their town, passed on stories about her Choctaw ancestors in the safety of their home. Stories that are cherished today.

A river of humanity suddenly flowed in my direction, and it has challenged my baseline assumption that people are afraid to talk openly about race.





MARC
QUARLES

**‘WITH
KIDS,
I’M
DAD,
ALONE ...
THUG!’**

Pacific Grove,
California

**PEOPLE IN
HIS AFFLUENT** neighborhood on the coast of central California were friendly enough when he was accompanied by his wife, who is white and German, and their mixed-race children, says Quarles, 58. But the reception was always much less friendly when he was alone. An ultrasound technician with long dreadlocks, Quarles became something of a minor celebrity after his story was featured on National Public Radio, and now people in his community know who he is. That’s a good thing, he says, because his kids are now in college and can no longer help make others feel safe around him.

LINDSEY
LOVEL
HEIDRICH

'I'M ASHAMED FOR MY ANCESTORS' RACE'

Brooklyn,
New York



LINDSEY LOVEL HEIDRICH works in criminal justice reform for a large philanthropy in New York, but her roots are in the South. She was born in Arkansas and later moved to San Diego and Atlanta.

She says her ancestors ran a small plantation in Georgia and owned slaves. "When I try and bring things up, or I try and criticize the South, you know, it's never gone over great with my family," said Lovel Heidrich, 33. "These are people who raised me and made me the person that I am, yet there's this tremendous disconnect between understanding our past. It's almost as if we see them through these totally different lenses, and I'm really struggling to sort of see how we can come together on that. Probably more so now than I felt a decade ago."

MY MOTHER HATED MY DARK SKIN

I'M WHITE, BUT I'M NOT BASIC

I AM MEXICAN WHEN IT'S
CONVENIENT

OVER THE COURSE OF THE PROJECT we have archived more than 500,000 stories from all 50 states and around a hundred countries and territories. We received stories from distant places where people are more likely to focus on

ethnicity, religion, and caste rather than on race. And yet people understand the forces at work behind the word: power, rejection, belonging, and fear.

This project started at a time when events and trends evinced a shake-up of America's social order: a Black family in the White House; dramatic shifts in attitudes about gay marriage and LGBTQ issues; the aftereffects of 9/11; and demographic changes that were abundantly apparent in advertisements, crowds at malls, students

**HANA
PEOPLES**

'I AM NOT AN EXOTIC CREATURE'

Seattle,
Washington

HANA PEOPLES

of Seattle said the constant guessing game about her identity makes her feel like a specimen. Her six-word story, "I am not an exotic creature," was born of exasperation.

Peoples, 27, said she's been subjected to harassment and unwanted attention from "creepy men" who fetishize a woman who is Asian and Black. "Every time I would just walk outside in the world, I was kind of hyperaware of how people were looking at me," said Peoples, who recently earned a master's degree in cinema and media studies from UCLA.

"Because I have an 'ambiguous look,' I get many guesses from people about what I am," she wrote. "I have gotten Mexican, Filipino, Nepali, Chinese, but rarely can people guess that I am both African American and Japanese."



enrolled in school, and in the U.S. states where the non-Hispanic white population has slipped into minority status (six and counting).

In the U.S. our national discussions of race are usually dictated and defined by big, explosive events: debates over immigration, a pioneer who breaks the color barrier, hateful language spray-painted on a storefront, a Confederate flag flying defiantly in the air, or a Confederate monument tumbling to the ground. But there is an intimacy to the stories people tend to share in this project.

Yes, there are direct references to slavery and affirmative action quotas and America's first Black president, the kinds of things found in history books and news headlines. But more often than not, people emote about their kids and co-workers, their neighborhood or church, the way the world responds to their accent, traditions, or body size.

There are many stories of women who are mistaken for nannies because they don't look like their multiracial children. Many stories from

Black men who see strangers pull their purses a bit closer as they step on an elevator or pass by on the street. Many stories from white people who assert that they've never owned slaves and are tired of being made to feel guilty about a past that does not directly touch their lives.

We've also heard from many families wanting to make sure their children are seen as "fully" or "authentically" American. They share a common aim, but their definitions of "truly" American vary. It also has changed since I started this work, as shifting demographics place America on a trajectory in which today's minorities become the majority.

And although we operate under the banner of the Race Card Project, many of our storytellers send tales that have nothing to do with skin color or the race or ethnicity boxes they tick on the census. The stories swirl around military service, sexual orientation, disability, or hair color.

HOW'D YOUR BABY GET RED HAIR?

ONCE HAD DREADLOCKS

NOW KNOW BETTER

TOO BLONDE TO BE CONSIDERED

"ETHNIC"

THROUGH THIS WORK, we get to see people as they see themselves. They chose what they wanted to talk about, what they wanted to interrogate or examine. As a result, we get to see a part of the world that is usually walled off. I've been able to listen to police officers, teachers, farmers, voters, and health professionals on the front lines. I've heard from released prisoners, returning soldiers, teenagers transitioning to a new gender, and people who never really meant to pass for something other than their inherited identity but who realized it was just easier not to correct someone who thought they were white or Christian or Filipino.

This multihued canvas underscores something that often gets lost when we consider matters of race. That word with all of its weight is usually tied to the historic toxicity of racism. Given America's Jim Crow past, that means the word "race" usually conjures up an automatic frame around white privilege and bias against Blacks. But that binary blanketing winds up obscuring or erasing other cultural threads. In the grand discussion of race and ethnicity in the U.S., Latinos, Asians, Iranians, Arabs, Native

Americans, and indeed people of all kinds of cultural backgrounds are pushed to the fringe.

A TURBAN DOESN'T MEAN A

TERRORIST

I'M APPALACHIAN—IT'S AN

INVISIBLE ETHNICITY

QUESTION. WOULD MLK SUPPORT

GAY RIGHTS?

THIS IS A QUILT that includes all of those threads. Micro-essays that are heartfelt and frank and underscore a hard truth. Yes, America is increasingly integrated and tolerant based on changing laws and evolving attitudes, and yet our experiences, assumptions, and fears around race actually are more complicated as a result. Progress comes with its own brand of indigestion.

After doing this work for years, I've had the benefit of tracking some stories over time, and that has provided valuable lessons about the fluid notion of identity. In a changing America, identity of all kinds—race, gender, class, ethnicity—is less likely to be defined by checking a box of fixed certitude as if encoded forever in amber.

Indeed, some of these six-word tales confirm that identity, anthems, and attitudes evolve based on time and circumstance. The people who roared their beliefs in college and resent that they must speak more carefully upon entering the workplace and eyeing a position in upper management. The white machinist who voted for Obama twice is drawn to right-wing groups that give voice to his gnawing fear of being edged out by immigrants who challenge his status and work for lower pay. The woman who championed diversity programs sours on the work after finding herself constantly on the defensive as people she saw as fellow warriors assert that her efforts, though well intended, overstep the boundaries of cultural appropriation.

The long view often is full of surprises. People transmute or constrict. Attitudes alter or calcify. Events outside of our control can almost immediately catalyze a nation's views and create a sense of personal vertigo.

I AM EVERYTHING DONALD TRUMP

HATES

HATED FOR BEING A WHITE COP

THE INVISIBLE ARAB UNTIL 9/12

LISTENING TO THIS symphony over so many years has been rewarding beyond measure. It also has been tough. Keeping the project alive has been a challenge. I am grateful to everyone who has entrusted us with their individual tales, and grateful to a small army of people who saw the potential in this project and have helped support it. There have been triumphs and breakthroughs and epiphanies, but this is an archive built primarily around race, so every week brings a new brand of anxiety or intensity. I am not suggesting this is a burden, but the contours of my heart are different after a decade. I have a better understanding of the challenges around race, the roots that feed racism, and the knee-jerk tendency to wish that it would all just be over, instead of trying to better understand why we can't overcome our divisions.

GRANDMA SENT \$100 WHEN
WE BROKE-UP

I AM DEAD TO MY FATHER

HELD AT GUNPOINT ... WILL TRY
ANYWAY

THE WORD “POST-RACIAL” was still being thrown about when I started this project in 2010. But even back then, many aspects of our lives suggested that race was not moving off the table anytime soon. Instead, it was about to become the main course—always on the menu in one way or another and usually served up piping hot. Ten years later, sociologists are talking about a public health phenomenon called racial battle fatigue—a condition defined as the cumulative result of a repeated stress response to unsettling mental and emotional conditions associated with persistent racial tensions. So much for post-racial. You can't even say that word these days without an attendant eye roll.

We are living in a moment in which so many people say they've grown tired of racial strife, while at the same time they're working hard to assert their particular viewpoint. Are we really tired of the subject or merely uninterested in exploring a world outside our own? In reality, exploring alternate worlds and perspectives is harder in some ways because of political polarization and media segmentation. Much of what we read, hear, and watch only confirms what we already believe. That is where this project differs. Each entry is a window into someone else's realm.

The Race Card Project archive includes a full spectrum of views and life experiences. You may find something familiar, something that will make you nod your head in agreement. But I can guarantee that if you scroll through these stories, you also will see things that will spark discomfort or make you want to cry, or squirm, or shake your fists to the sky.

That's not surprising. This is a journey through race and identity. This is a project that holds up a mirror to the world. Given the subject, why would anyone ever expect to enjoy or embrace everything they see?

Over the past decade, the Race Card Project has grown into a trusted space that excavates hidden truths and questions hardened narratives. The six-word writing exercise and narrative archive is now used in schools and universities across the country and outside the U.S. It's also used by institutions of all kinds that are seeking to stoke conversation or surface stories that people don't normally discuss.

Decades from now this vast archive of first-person narratives around one of history's most vexing issues will help historians, sociologists, anthropologists, and journalists understand the lived experience of race and identity in a period bookended by the presidencies of Barack Obama and Donald Trump—and now punctuated by a global pandemic, street protests, and political turmoil. The archive is like an almanac, a catalog, a repository of the small things that make up the larger picture. We are defined by laws and events and trends, but the smaller pixelated moments actually are what complete that picture.

I have spent 10 years working on a project that began with a mistaken assumption. I thought no one wanted to talk openly about a subject as prickly as race. I was gloriously wrong. Sometimes you open the wrong door and find yourself in the right place. □

**TELL YOUR
STORY**

To join this conversation, go to *theracecardproject.com*. Follow the prompts to add your six-word story. Write more if you wish, and see the statements of others who've also come to share their stories.

'BLACK BOY. WHITE WORLD. PERPETUALLY EXHAUSTED'

ON THE FIRST NIGHT Esayas Mehretab moved into a new apartment with his college roommate back in 2012, they decided to go out with a group of five friends. They all piled into a minivan and headed out to explore the neighborhood around Virginia Commonwealth University in Richmond.

Within seconds they were pulled over by city police and told to exit the car one by one, with their hands up.

"It just got crazy because we got pulled over and there was one cop car and we're like, 'What's going on?'" Mehretab says. "And then there were two cop cars, then three, then four, then five, then six, and they just kept coming. We were pretty scared to say the least."

Mehretab says police handcuffed the students, told them to lie down on the sidewalk, and took their wallets. After about 30 minutes, the students were uncuffed and allowed to stand. The police explained that there had been a robbery that night and two of the students in the minivan—the two who were Black—fit a description of the suspects.

"That's how I was introduced to the city of Richmond," Mehretab says. He and his friends in the van never talked about the incident again, and he didn't mention a word to his parents until years later, when he decided to share his six-word story: "Black boy. White world. Perpetually exhausted."

Mehretab's family had come to the United States as refugees, seeking to escape persecution in Ethiopia during that country's civil war. Mehretab was five years old at the time, and for most of his life he was told to focus on achievement, school, and sports.

"For me there was always a sense of having no space for myself to go and talk about my experiences, my struggles, and what life was really like for me as a Black boy," he says.

Mehretab, now a senior recruiter with a company in Richmond, eventually decided that his parents needed to know about the challenges he faces as a Black man and an immigrant, including his encounter with the police. His silence, he says, normalized that situation. In retrospect he treated it as a rite of passage, he says, something that was going to happen eventually. No big deal. "I dealt with it. I got through it."

"I should have been angry and I wasn't, and that makes it even sadder than what happened."



RECKONING WITH THE PAST

Shortly before entering college in Richmond, Virginia, Esayas Mehretab had a frightening encounter with police. At the time he decided not to tell his parents, who had fled persecution in Ethiopia. But he discovered that keeping quiet about the challenges he faces as a young Black man takes a toll.



RECKONING WITH THE PAST

Daniel Robbins is a firm believer in the equality of all people. But he's troubled by his seemingly involuntary reaction to seeing a minority doing well at something. He struggles to eradicate those low expectations.



'ASHAMED THAT ACCOMPLISHED MINORITIES SURPRISE ME'

SOMETIMES SUBMISSIONS to the Race Card Project hit people like a punch to the gut, and Daniel Robbins's six words certainly fall into that category. They tend to make people squirm. Some are angry that he would dare to say something like this out loud. They are offended by his honesty.

I have a different take. I appreciate his candor, because it represents an attitude that is very much alive in the workplace and the classroom and really anyplace where the achievements of people from historically marginalized groups collide with deeply ingrained expectations. Robbins, a product designer who lives in Seattle, submitted his six words back in 2014 after attending a leadership program that explored the roots and impact of racism.

"No matter how liberal and progressive I might claim to be, no matter how many workshops I've been to or essays I've read about privilege, I still hear my inner voice express pleasant surprise when I see a minority doing well at something," Robbins wrote in a short backstory that accompanied his six-word submission. "Whether I see a minority excelling in business, writing an editorial in the national press, or doing rounds in a hospital, inside I first say, 'Wow, look at that!'"

He added, "I am not proud of this and I don't know how to fix it."

Years later, he's still working to find those answers, still committed to making himself vulnerable by pushing past his comfort zone. And he still admits to hearing that little voice of yowza astonishment when he sees excellence in what he considers to be unexpected places. Everyone is different, but for him, he says the first step is to acknowledge that little voice and then figure out how to respond.

"You know, to understand that that's an interior voice and that sometimes it can be more respectful for me to show them just as much—how do I say this—to show them the same response that I'd show anybody else," Robbins says in an interview. "It's sort of like the white liberal progressive side of me wants to say, 'Oh my God, that's such a great idea. How did you come up with that?' But I wouldn't say that to a white co-worker."

RECKONING WITH THE PAST

'WHITE HUSBAND BECAME IRANIAN SEPTEMBER 11TH'

Maren Robinson (left)

'YOU DON'T LOOK IRANIAN!' 'I AM.'

Rom Barkhordar (right)







**MAREN
ROBINSON**

'WHITE HUSBAND BECAME IRANIAN SEPTEMBER 11TH'

**ROM
BARKHORDAR**

'YOU DON'T LOOK IRANIAN! 'I AM.'

**Chicago,
Illinois**

ON THE MORNING of September 11, 2001, Maren Robinson and Rom Barkhordar were on a cross-country road trip when they pulled into an Arkansas truck stop to fill up and grab a bite to eat. When they walked inside, everyone was staring at a TV mounted high on the wall. Smoke was rising from side-by-side skyscrapers in New York City.

"What's going on up there?" Barkhordar asked. A man sitting at the counter explained that the World Trade Center was under attack. Then a second man sitting nearby spat out an expletive usually directed at people of Middle Eastern descent. Barkhordar looked at his wife and said, "Let's get out of here."

Barkhordar is Iranian American. His wife, Maren, is blond and of European descent. September 11 became a line of demarcation in their lives. "I would say that definitely was the first moment I had that I just physically feared for [Rom's] safety, and that has not gone away," Robinson says.

After hearing a radio program about the Race Card Project, both Robinson and her husband were inspired to share their stories. But neither of them knew what the other had said when they submitted them.

The change they experienced after 9/11 is captured in the six words Robinson submitted: "White husband became Iranian September 11th." She also provided a written backstory to explain her choice of words. "I watched how my American-born, half-Iranian husband went from being perceived as white... to being perceived as vaguely 'Middle Eastern' (eliciting double takes on trains and extra searches at airports) after September 11th."

Robinson is a script consultant at several Chicago area theaters and is an administrator at the University of Chicago. Barkhordar is an actor with a long list of credits in theater, television, and video game voice-overs. His submission to the Race Card Project reads: "You don't look Iranian!" "I am."

Before 9/11, Barkhordar says, he was seen as a swarthy white guy who could play a range of ethnic roles. After 9/11, the work that came his way was most often for Arab bad guys, the kind of roles denoted in scripts as "Terrorist #2."

Then Robinson and Barkhordar began getting mail and telemarketing calls in Farsi and Arabic, languages neither of them speak. The sudden influx of Middle Eastern messages was a complete mystery. Today they suspect they were being surveilled by some government initiative to make assessments about Middle Eastern men in the U.S.

"I mean, I have a totally clear and spotless background and record," Barkhordar says. "They were just going by the fact that I had a certain last name that was Iranian, that I was male of a certain age, and so I fit that profile."

With the 20th anniversary of 9/11 on the horizon, they still feel the sting. If anything, their experience has made their allegiance to Barkhordar's ethnic background stronger, especially through their work in theater. In her role, Robinson advocates for stories that examine a broader range of cultures and characters. And Barkhordar has grown a beard, in part to more closely identify with his culture, on and off the stage.

MARISHA VANDENBERG says she had never been happier in her life. After raising three children with her husband, Richard, she had returned to school with the intent of earning a master's degree in education. Yet when one of her professors at California Baptist University in Riverside asked students to send their six-word stories to the Race Card Project back in 2017, Marisha wrote about regret.

"Blackcican Spanish Speaker Didn't Teach Kids" are the six words she chose for her class assignment. Her first three words are like a quick bio: Her father is Black and Creole, and her mother's side of the family came from Mexico. Marisha was raised in a tight-knit family that included her Latino grandparents, two uncles, and three aunts.

Her next three words, "didn't teach kids," hark back to a decision she now wishes she could reverse. Her husband is white and of European ancestry. He had a DNA test and discovered that he has Norwegian, Swedish, German, English, and Dutch ancestors. Marisha jokingly calls Richard her Viking.

When she and Richard started their family, Marisha's mother would encourage the Vandenberg toddlers to use Spanish as they were learning to talk. Marisha had always assumed her kids would grow up bilingual just like she did, but Richard was worried that they would get confused. She insisted they would be just fine. "He had never experienced anyone being bilingual in the home," she said of her husband. "None of my reassurances helped."

People who see her story at the Race Card Project website might jump to the conclusion that Richard is uncomfortable with Latino culture, Marisha said. But she insists that they wouldn't take that leap if they knew his heart.

In time, she agreed to an English-only approach for their children, but because they spent so much time with her extended family, she was secretly betting they would learn Spanish almost by osmosis. To her regret, that didn't happen. If anything, the grandparents and great-aunts and -uncles wound up learning more English from the kids than the kids learned Spanish from their elders.

While this was happening, the world around them was shifting. Especially in California, the ability to easily switch between Spanish and English was increasingly seen as a skill employers were seeking—and sometimes rewarding with higher pay.

By the time their kids were teenagers, the Vandenberg decided to change course. They made sure the kids took Spanish in school and gave family members the green light to serve as language ambassadors. The kids are getting there, Marisha says. They know the basics. But she admits that Spanish—or the "Spanglish" she often speaks—doesn't quite roll naturally off their tongues. Ironically, after working for years in restaurants in his youth, Richard had a stronger command of Spanish than his kids—but they have since caught up.

"I wish my young ignorance hadn't allowed me to cave in," Marisha says. "But it's never too late to right some wrongs."



**MARISHA
VANDENBERG**

**'BLACKCICAN
SPANISH
SPEAKER
DIDN'T
TEACH
KIDS'**

**Riverside,
California**



RECKONING WITH THE PAST

'BLACKCICAN
SPANISH
SPEAKER
DIDN'T
TEACH
KIDS'

Marisha and Richard Vandenberg met in high school, married as young adults, and raised three children (from left to right): Taylor, 20, Teresa, 20, and Kaili, 18. Marisha's wish that their kids learn Spanish eventually came true.







CELESTE GREEN

Chapel Hill,
North Carolina

59

'WE AREN'T ALL "STRONG BLACK WOMEN" '

CELESTE GREEN doesn't mind that people see her as a strong Black woman. She is in fact all three of those things. What irks the 32-year-old resident physician is that it's too often all that people see, overlooking traits that make her equally proud: her grace, intelligence, patience, and composure.

So when it was time to write an application essay for her second attempt to get into medical school, she built her personal statement around the six-word story she sent to the Race Card Project back in 2012: "We aren't all 'Strong Black Women.'"

"Who I am is not just a Strong Black Woman, frowning and forging through life like a checklist," Green wrote in her essay to the University of North Carolina's medical school in Chapel Hill. "It is not my duty to feign strength or self-righteousness, but to turn my experiences into empathy."

Green, who was admitted and is now in her obstetrics and gynecology residency, said the strong Black woman trope is a double-edged sword. It's too often harmful to women who think they must always live up to that expectation. And it's dangerous when people think Black women can handle just about anything without help or respite. That stereotype has become so fixed in the popular imagination that it's often considered as a kind of "you go, girl!" compliment.

"It just carries so much expectation, being strong," Green wrote. "'Why would we give her more pain medicine? She's strong.' 'She doesn't need that grant or scholarship. She's strong.' And these examples sound hyperbolic, but when we look at disparate health outcomes, pay gaps, recognition for our art, our advocacy, our intelligence... Black women continue to be overlooked."

"I think if a Black woman truly feels her most powerful and capable when she describes herself as strong, then I fully support her existing in that space," Green wrote. "I feel strong much more often now than in those moments when I wrote my six-word story. But 'strong Black woman' can quickly change from an adornment to a burden."

Too often, she wrote, it's "an excuse to demand more of us at the expense of our own well-being and peace."

RECKONING WITH THE PAST

When Celeste Green first sent her six words to the project, it kick-started an online exchange that lasted for days. "Has 'strong' become a euphemism for 'it doesn't matter how we treat them, because they'll survive?'" wrote one commenter.

KRISTEN MOORHEAD

Silver Spring,
Maryland

'I WISH HE WAS A GIRL'

KRISTEN MOORHEAD sent her six words to the project on November 26, 2014, the day Cleveland police had released a grainy surveillance video showing how 12-year-old Tamir Rice was shot by an officer seconds after the officer arrived in response to a 911 call. The child, it turned out, was holding a toy pistol.

Like Tamir Rice, Moorhead's son, Che, was 12 then. His mother typed, "I wish he was a girl." She said it felt like a silent scream.

"I've always told my son, 'You can be anything you want to be,' " she also wrote that day. "He's 12 now. Almost my height and swears he doesn't see color. His possibilities are infinite, yes, but there's a cruel catch. You can be anything you want to be, but first you must survive."

This winter I watched as Kristen read her six words to her son, who's now 18. She explained that she hadn't wished for a different child but was processing a deep-seated fear because so many unarmed Black men and boys have been killed by police.

At six feet tall, Che towers over his mother. The product of several gifted and talented programs, he's now preparing for college and no longer professes that he doesn't see color. Conversely, he said his color and gender are what the world often sees first in him.

"I'm very much still in the habit of whenever I'm walking into a grocery store, even walking past someone on the street, I'll always say 'hi' or 'hello' or try to have a miniature exchange with them, just because the way that I speak tends to change people's perception of me," said Che, who still has a boyish voice. "Meaningless exchanges. Like, 'The weather we're having is so nice.' And having to always have this happy face on... and put up this wall that makes me a one-dimensional figure that can exist as a person, or not even as a person, but as a semblance of a person rather than a threat."

You've probably heard of the tradition in which Black and brown parents give their children "the talk," advising them how to comport themselves so they can get home safe, especially if they encounter police. Well, this was "the talk" in reverse. A child explaining to his mother for the first time how he's absorbed and acted on all her advice. Kristen is glad her son learned the lessons, yet feels more pain than pride.

"There's a level of resentment, honestly, that my kid has to learn this, and that I had to teach it to him," she said. "There's no satisfaction in your child mastering these lessons."



RECKONING WITH THE PAST

Kristen Moorhead wished her son, Che, was a girl. Why? Because young Black males are “perceived guilty until proven innocent,” she said. For his part, Che feels pressure to be “the model minority,” he said. “I have to be this perfect person. It’s exhausting.”

Robert Turner prays near the site of a newly discovered mass grave in Tulsa's Oaklawn Cemetery, the first found from the 1921 attack by white rioters on Greenwood, a Black neighborhood. Turner is pastor at Vernon African Methodist Episcopal Church, which was heavily damaged in the rampage.





A century ago, a white mob massacred as many as 300 people in the prosperous Black district of Tulsa, Oklahoma. Today the city is finally coming to terms with the devastation.

BY **DENEEN L. BROWN**

PHOTOGRAPHS BY **BETHANY MOLLENKOF**

RECKONING WITH THE PAST

After Dick Rowland, a Black 19-year-old, was accused of assault, a white mob raged through Greenwood—looting, burning, and killing. An unknown photographer recorded the destruction and provided a caption describing the scene.





RUNNING THE NEGRO OUT OF
TULSA
JUNE, TH. 1. 1921

VILLAGE BLACKS TH SHOP

I.

On June 1, 1921, as a white mob descended on Greenwood, the all-Black community in Tulsa, Oklahoma, Mary E. Jones Parrish grabbed her young daughter's hand and ran for her life. Dodging machine-gun fire, they sprinted down Greenwood Avenue, a street so prosperous it would later be remembered as Black Wall Street. Above them, the sky buzzed with several civilian airplanes dropping makeshift turpentine bombs. Thousands of Black people fled while the mob advanced—looting; torching houses, churches, and other buildings; and shooting Black people in cold blood. “Get out of the street with that child, or you both will be killed!” someone yelled. But Parrish saw nowhere to hide. She felt it would be “suicide” to remain in her apartment building, “for it would surely be destroyed and death in the street was preferred, for we expected to be shot down at any moment,” she recalled in *Events of the Tulsa Disaster*, her 1922 book, which includes rare witness accounts of what has become known as the 1921 Tulsa Race Massacre.



Black residents—some of them veterans of World War I—fought to prevent the white rioters from crossing railroad tracks dividing Greenwood from the rest of Tulsa, but they were outnumbered. Many of the Black Tulsans who survived the violence were rounded up and confined in internment camps.

DEPARTMENT OF SPECIAL
COLLECTIONS, MCFARLIN LIBRARY,
UNIVERSITY OF TULSA



Black people rushed out of burning buildings, Parrish wrote, “some with babes in their arms and leading crying and excited children by the hand; others, old and feeble, all fleeing for safety.”

Parrish hurried toward Standpipe Hill, the highest ground in Greenwood. But she found no safety. As she looked below, she saw an exodus of Black Tulsans and smoke rising from what had been a bustling commercial district. Someone in a truck called out to her. She and her daughter scrambled aboard, escaping from the death and destruction.

By the end of the two-day rampage, as many as 300 Black citizens had been murdered and Greenwood had been destroyed.

The attack was one of the worst acts of terrorism in U.S. history—part of a World War I-era wave of racial violence by white people against

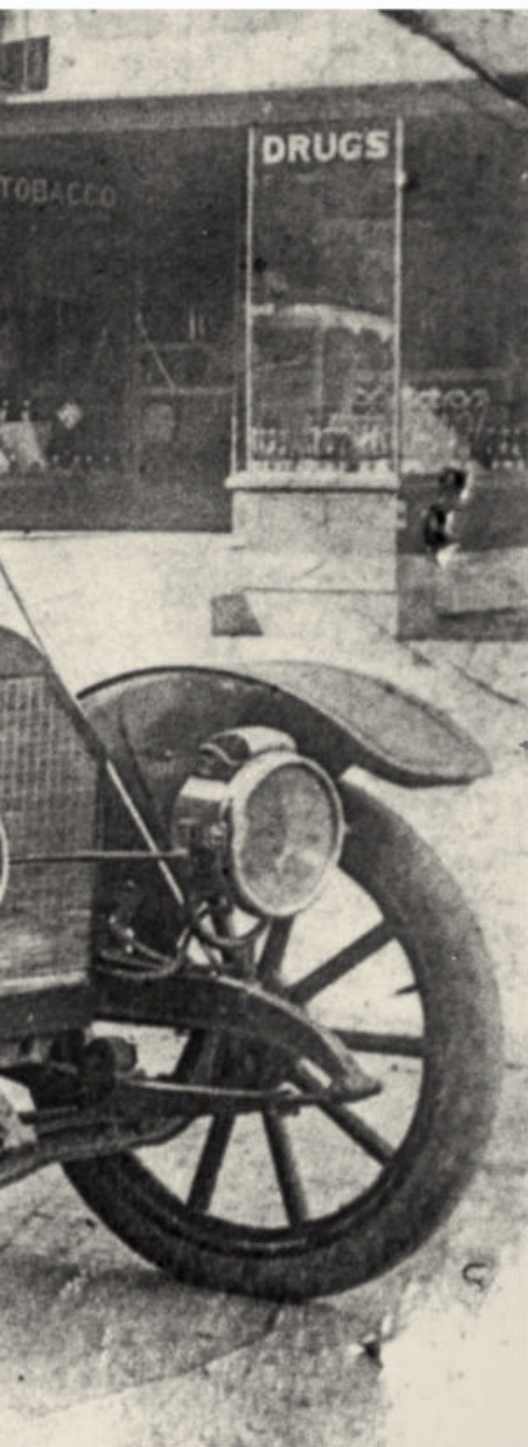
Tulsa and the Red Summer

The documentary *Rise Again: Tulsa and the Red Summer*, featuring DeNeen L. Brown, author of this article, will air in June on National Geographic.

Black communities. Some historians describe what happened in Greenwood as “a massacre, a pogrom, or, to use a more modern term, an ethnic cleansing,” reported the 2001 Tulsa Race Riot Commission, the first governmental investigation into the bloody assault, 80 years later—a gap that reflects how white Tulsa essentially excused and covered up the massacre for generations.

“For others, it was nothing short of a race war,” the commission continued. “But whatever term is used, one thing is certain: When it was all over, Tulsa’s African American district had been turned into a scorched wasteland of vacant





Black entrepreneurs and professionals flourished in Tulsa before the massacre. In 1920 doctors, dentists, and pharmacists attending a medical convention gather in front of Williams Dreamland Theatre (top). The movie theater was owned by Loula Williams (left, with her husband,

John, and their son, William). Loula also had a popular confectionery, while John's success as a chauffeur for oilmen and as a mechanic at an ice-cream manufacturer allowed him to open his own auto repair shop. Florence Mary Parrish (center) learned to type from her mother, Mary E.

Jones Parrish, who ran a secretarial school and later collected crucial testimony about the attack on Greenwood. J.B. Stradford (right, with his wife, Augusta) built a full-service hotel. The Williamses, the Parrishes, and the Stradfords survived the violent assault in 1921. Their businesses didn't.

CLOCKWISE FROM TOP: OKLAHOMA HISTORICAL SOCIETY/LIBRARY OF CONGRESS; PRIVATE COLLECTION OF LAUREL STRADFORD; OKLAHOMA HISTORICAL SOCIETY; TULSA HISTORICAL SOCIETY & MUSEUM

A LASTING DESTRUCTION

When the white mob burned 1,115 homes, numerous businesses, and other property in 1921, “the savings of a lifetime were reduced to ashes,” wrote a group of prominent Black Tulsans. Insurance companies refused to pay claims, citing riot clauses in their policies. Black property owners filed 193 lawsuits seeking recompense. The cases were dismissed, the losses permanent.

INDIVIDUAL LOSSES

Compiled from lawsuits against insurance companies and the city, these amounts reflect a sampling of residents’ losses, as if the value had grown for 100 years at 6 percent compound interest, a benchmark for investment returns.

Stalie Webb
Police deputy

\$1,174,664

Caroline Lollis
Property owner
\$3,325,839

Barney Cleaver
Police deputy, property owner. Cleaver was Tulsa’s first Black police officer. On duty that violent night, he came home to a burning house. He later testified against the police chief, accusing him of negligence.

\$20,785,306

Reopened his restaurant in the business district

P.J. Eldridge
Restaurant owner
\$2,069,743

Sam Mackey
Carpenter. After his home and two rentals burned, he rebuilt in brick. The house, since relocated, still stands.

\$5,428,833

**James Henri and
Carlie Marie Goodwin**

\$678,604

Representative Regina Goodwin’s great-grandparents lost 14 properties, including this one.

A.F. Bryant
Doctor. Lost a pharmacy; rebuilt it.
\$3,294,623

Henry Wilson
Hotelier, property owner
\$3,991,889

Andrew C. Jackson
\$1,017,906

Jackson, a noted surgeon, was shot and his office building destroyed. His widow sued the city.

Many of the 10,000 people who lost their homes sought shelter in Red Cross tents and shanties.

Tent
Bethel Seventh-day, Adventist Church

African Methodist Episcopal Church

Dunbar Elementary School

EASTON ST

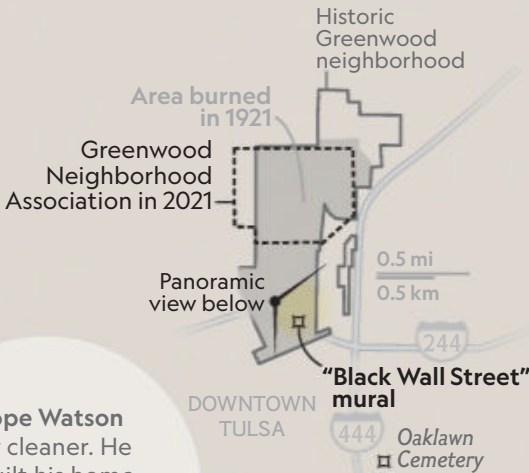
A BUSTLING COMMUNITY

The convergence of Tulsa’s oil boom and Jim Crow segregation fueled the district’s growth. Black-owned businesses met most of the residents’ needs. Money stayed in the neighborhood, and many people prospered.

Groceries/ Meat markets 41	Restaurants 30	Other 12	Boarding and rooming houses 11
		Billiards 9	Hotels 5

\$610,743,750

PROJECTED LOST WEALTH. In today's dollars, material losses from the rampage total \$26,752,705. But the long-term cost to the victims includes the loss of the ability to build wealth and pass it on to descendants. By that measure, \$610,743,750* of accumulated wealth was erased.



J.D. Mann
Grocer,
property owner
\$2,985,858

Mann lost eight rental properties and his grocery store, which he reopened.

James Johnson
Minister, property owner. Lost four houses, including his home.
\$9,466,528

Hope Watson
Dry cleaner. He rebuilt his home.
\$3,921,314

Will Roberson
Plumber, property owner. Lost 12 houses to fire.
\$6,200,746

A.L. Ferguson
Pharmacist. His drug-store in the Stradford Hotel burned. He later reopened it.
\$6,446,740

A.W. Brown
Minister. He moved elsewhere in Greenwood.
\$2,797,206

W.A. Baker
Grocer
\$1,866,161

Stayed in Tulsa but didn't rebuild this store

Vernon A.M.E. Church
Under construction when the mob attacked, the church was rebuilt and still stands today.

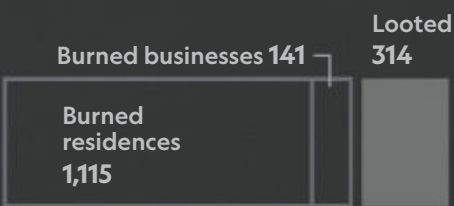
GREENWOOD BUSINESS DISTRICT

THE PANORAMA
A partial view of Greenwood from Booker T. Washington High School



CASUALTIES

The American Red Cross, which oversaw the disaster relief effort, tallied the harm to people and property. For deaths, the agency's report states, "NO ONE KNOWS."



*THE TOTAL LOSSES CLAIMED IN 1921 DOLLARS ARE ESTIMATED AT \$1.8 MILLION. CONVERTED TO 2021 DOLLARS, THAT AMOUNT WOULD EQUAL \$26,752,705. IF INVESTED FOR 100 YEARS AT 6 PERCENT COMPOUND INTEREST—A BENCHMARK FOR INVESTMENT RETURNS—TOTAL LOSSES WOULD BE WORTH \$610,743,750.

RECKONING WITH THE PAST

Journalist J. Kevin Ross has deep ties to Tulsa. His great-grandfather lost a juke joint in the riot, and his father introduced the legislation launching Oklahoma's first official investigation into the massacre. Ross has long urged the city to hunt for mass graves.



lots, crumbling storefronts, burned churches, and blackened, leafless trees.”

Nearly 10,000 people—almost the entire Black population and close to a tenth of Tulsa’s total—were left homeless. Some of Greenwood’s leading citizens, including A.J. Smitherman, the crusading publisher of the *Tulsa Star*, and wealthy hotel owner J.B. Stradford, left town after being falsely accused of instigating the riot.

“In addition to the material items, we lost people. We lost generations, not just generational wealth. We lost bodies,” says Oklahoma State Representative Regina Goodwin, whose grandfather and great-grandparents survived the massacre. “Dreams were unfulfilled, and the sadder truth, some dreams were never dreamt,” she adds. “Think of the classic poem by Langston Hughes, ‘What happens to a dream deferred?’”

Today, as generations descending from Tulsa’s Black families of the early 20th century remain scattered, Greenwood’s business district has been reduced to one gentrified block catering mostly to white people. But the city finally is trying to reckon with the Tulsa Race Massacre, a disgrace it has long tried to forget. A search for mass graves of victims continues, after scientists found one last October in the Black section of one of the city’s public cemeteries.

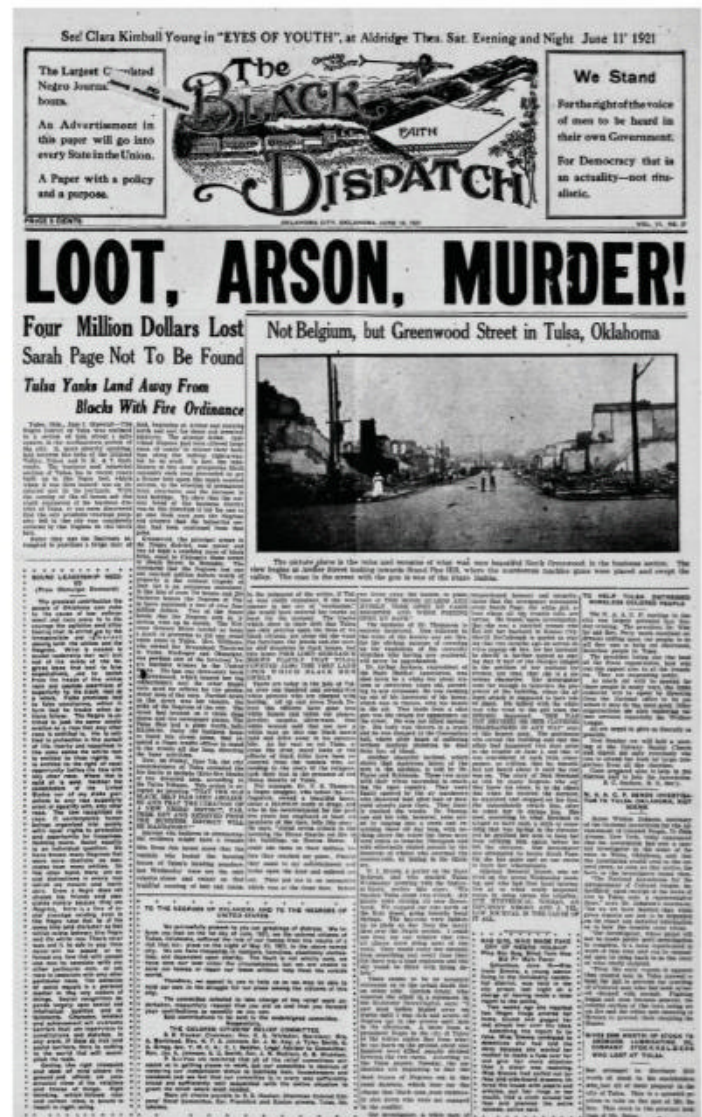
II.

AT THE TIME of the massacre, Greenwood was a vibrant Black community in a nation where racial segregation—and limited economic opportunities for African Americans—was a theme of daily life.

The 1905 discovery of the Glenn Pool Oil Reserve catapulted Tulsa, conveniently located at a railroad and river crossroads, into an oil boom. People flooded into the region for jobs. Black people left places such as Mississippi, Missouri, and Texas for Greenwood, which some called the promised land, a glorious mecca rich with opportunities and the chance to build a Black community that flourished on its own terms.

In 1908 O.W. Gurley erected one of the first buildings in Greenwood, a rooming house on a “muddy trail,” as the riot commission report described it, that would become Greenwood Avenue. He later “bought 30 or 40 acres, plotted them and had them sold to ‘Negroes only.’”

Greenwood was impressive. Redbrick buildings lining the main street contained “two theaters,



Newspapers across the country reported on the violence. The *Black Dispatch*, an Oklahoma City weekly, likened the devastation to World War I. Yet memories of the massacre faded

into collective silence. Tulsa boosters didn’t want the city’s reputation tainted; Black residents didn’t want to burden their descendants with the horrors they’d endured.

groceries, confectionaries, restaurants, and billiard halls,” writes Scott Ellsworth in *Death in a Promised Land: The Tulsa Race Riot of 1921*. “A number of black Tulsa’s eleven rooming houses and four hotels were located here.” Doctors, lawyers, insurance agents, printers, bankers, and other Black entrepreneurs opened businesses in Greenwood. Parrish described some of the houses as “homes of beauty and splendor,” although most residents lived quite modestly.

By 1921, Greenwood, racially segregated from white Tulsa by Jim Crow laws, was a self-contained world. It had nationally recognized schools, including Dunbar Elementary School and Booker T. Washington High School; two Black newspapers, the *Tulsa Star* and the *Oklahoma Sun*; a Black-owned hospital; and more than a dozen Black churches.

“After spending years of struggling and



sacrifice, people had begun to look upon Tulsa as the Negro Metropolis of the Southwest,” Parrish wrote. “Then the devastating Tulsa Disaster burst upon us, blowing to atoms ideas and ideals no less than mere material evidence of our civilization.”

The massacre came on the heels of the Red Summer, a reign of terror in 1919, when white mobs killed and lynched hundreds of Black people in more than 25 places across the country. The term—coined by James Weldon Johnson, who wrote the words set to music in “Lift Every Voice and Sing,” often called the Black national anthem—evoked the blood spilled in the streets of Washington, D.C.; Elaine, Arkansas; Knoxville, Tennessee; Omaha, Nebraska; Charleston, South Carolina; Longview, Texas; and Chicago, Illinois.

Thriving districts such as Greenwood threatened the racial hierarchy that had dominated American life for much of the nation’s first 145 years, as did the Black soldiers who had returned from World War I demanding the same human rights they’d fought for abroad. The Ku Klux Klan, reborn in 1915 with a surging membership,

responded with a wave of racial violence. Black people fled the South for cities in the West and North—where what historian Scott Ellsworth describes as “new and especially insidious forms of militant white racist thought” also held sway.

“In these years I have noticed a growing racial hate by the lower Whites because of Negro prosperity and independence,” Tulsa survivor E.A. Loupe told Parrish. These forces “broke loose on a pretense, and thus swept down upon the good citizen with all the hate and revenge that has been smoldering for years.”

III.

THE TULSA MASSACRE began as many of the Red Summer rampages did, with an accusation that a Black man had assaulted a white woman. In this case the roles were filled by teenagers. On May 30, 1921, Dick Rowland, 19, entered the elevator in the Drexel Building in downtown Tulsa. As he went from the first floor to the third, he may have bumped into or stepped on the foot of



Five days after his office was burned, lawyer B.C. Franklin (at right in historic photo), his partner I.H. Spears, and their secretary Effie Thompson set up shop in a tent. They fought efforts to prevent Black property owners from rebuilding. Nearly 100 years later, survivors and descendants—including Ellouise Price-Cochrane (above), whose father’s cousin was Dick Rowland, the accused teen—filed a lawsuit seeking reparations from the city.

SMITHSONIAN NATIONAL MUSEUM OF AFRICAN AMERICAN HISTORY AND CULTURE (LEFT)

the elevator operator, a 17-year-old named Sarah Page. She shrieked, someone came to see what had happened, and Rowland ran.

Rumors of the incident swept through Tulsa’s white community, becoming “more exaggerated with each telling,” according to the Tulsa Historical Society and Museum.

The next day, a headline in the *Tulsa Tribune* blared, “Nab Negro for Attacking Girl In an Elevator.” Page claimed Rowland had “attacked her, scratching her hands and face and tearing her clothes,” the newspaper reported.

Rowland was arrested and held at the Tulsa County Courthouse. Soon a lynch mob surrounded the courthouse, blocking streets and spilling over into the front yards of nearby homes. A group of armed Black men, many of them war veterans, hurried from Greenwood to the courthouse to protect Rowland. The previous year a white man had been lynched in Tulsa—the city’s first—and they saw how easily it played out. They intended to prevent another one.

The sheriff rejected their help but managed

to prevent Rowland from being lynched. (The charges against Rowland would be dropped later.) But the crowd's attention had shifted. A white man confronted an armed Black veteran. A shot was fired, and all hell broke loose.

That night, hundreds of white people, many of them deputized by city officials, marched on Greenwood.

They were merciless. Some white men broke into the home of an elderly Black couple. "The old man, 80 years old, was paralyzed and sat in a chair," said an account published 10 days later in a Chicago newspaper. "They told him to march and he told them he was crippled, but he'd go if someone would take him, and they told his wife to go, but she didn't want to leave him. He told her to go anyway. As she left, one of the damn dogs shot the old man, then they fired the house."

George Monroe, who was five years old then, recalled hiding with his older sisters and a brother under their parents' bed. "When we

along the street. He scooted his body around by shoving and pushing with his hands covered with baseball catcher mitts. He supported himself by selling pencils to passersby, or accepting their donations for his singing of songs."

The mob tied a rope around his neck and dragged him through the streets of Greenwood behind an automobile.

A.C. Jackson, who'd been called "the most able Negro surgeon in America" by one of the founders of the Mayo Clinic, tried to head off the mob. When a group of white rioters gathered on his front lawn, he came out of his house with his hands up, saying, "Here I am, boys. Don't shoot." They shot the distinguished doctor anyway, and Jackson bled to death. Frissell Memorial Hospital, the only hospital serving Black people, had been burned to the ground.

White men wearing uniforms "carried cans of oil into Little Africa," a name white people used for Greenwood, "and after looting the homes, set fire to them," wrote Walter White, an investigator

White rioters set fires, house by house. They burned CHURCHES, HOTELS, GROCERY STORES, THE BLACK PUBLIC LIBRARY. The mob prevented city firefighters from quenching the fires.

saw ... four men with torches in their hands—these torches were burning—when my mother saw them coming, she says, 'You get up under the bed, get up under the bed!' And all four of us got up under the bed," Monroe told the riot commission eight decades later.

"I was the last one and my sister grabbed me and pulled me under there," said Monroe, who watched the men ransack the room and set the curtains on fire. "While I was under the bed, one of the guys coming past the bed stepped on my finger, and as I was about to scream, my sister put her hand over my mouth so I couldn't be heard."

The mob's brutality was evident throughout Greenwood. "I was downtown with a friend when they killed that good, old colored man that was blind," a massacre survivor told the commission. "He had amputated legs. His body was attached at the hips to a small wooden platform with wheels. One leg stub was longer than the other, and hung slightly over the edge of the platform, dragging

for the NAACP, who traveled to Tulsa shortly after the massacre. White, a Black man whose light complexion allowed him to pass as white as he interviewed witnesses to lynchings and killings across the nation, was shocked by what he learned in Tulsa. "Many are the stories of horror told to me—not by colored people—but by white residents," White wrote in a report published in the *Nation* magazine in 1921.

Tulsa likely became the first U.S. city bombed by air, as some local white pilots took to the sky armed with incendiary devices. "From my office window, I could see planes circling," wrote lawyer B.C. Franklin in a typed witness manuscript. "Down East Archer [Street], I saw the old Mid-Way hotel on fire, burning from its top, and then another and another and another building began to burn from the top. 'What, an attack from the air too?' I asked."

Then he saw three men running on Greenwood Avenue. "The three men—one of whom

lugged a heavy trunk on his shoulder—were all killed as they were crossing the street—killed before my very eyes.”

As night closed in on the horrors of May 31, some Black people huddled, praying the worst of the violence was over. But the worst was to come.

“Tuesday night, May 31, was the riot,” a witness later told Mary Parrish. “Wednesday morning, by daybreak, was the invasion.”

The mob had retreated only to regain strength. As many as 10,000 white people amassed on the outskirts of Greenwood. A machine gun was mounted on top of a grain elevator.

At exactly 5:08 that morning, a piercing whistle sliced the morning silence. “With wild, frenzied shouts,” a witness later recalled, “men began pouring from behind the freight depot and the long string of boxcars and evidently from behind the piles of oil well [piping].”

The white rioters set fires “house by house, block by block” as they moved through Greenwood. They burned “a dozen churches, five hotels, 31 restaurants, four drug stores, eight doctor’s offices, more than two dozen grocery stores, and the Black public library. More than a thousand homes were torched, the fires becoming so hot that nearby trees and outbuildings also burst into flame.” The mob prevented city firefighters from quenching the fires.

Millions of dollars of Black wealth vanished that day. Gurley, one of the community’s founders, lost as much as \$157,783, according to the Tulsa Race Riot Commission report. Today the value of his destroyed assets (compounded annually at 6 percent interest) would have grown to \$53.5 million—a potential fortune lost.

IV.

IN THE AFTERMATH of the massacre, the city smelled of death.

The governor called in out-of-town National Guard units to keep the peace. The local units had joined the mob’s destruction. Rather than protecting Greenwood residents, they’d detained them in internment camps at the city’s convention hall, baseball park, and fairgrounds. Black Tulsans were kept under armed guard, “not able to leave without permission of white employers,” according to a 2020 Human Rights Watch report on the massacre. “When they did leave, they were required to wear green identification tags.”

While they were detained, mobs looted their

homes—stealing furs, pianos, music players, furniture, clothing—and disposed of the victims’ bodies. Survivors recounted seeing bodies of Black people dumped into mass graves, thrown on trucks, or tossed into the Arkansas River. “I saw two truckloads of bodies,” one survivor told the riot commission. “They were Negroes with their legs and arms sticking out through the slats. On the very top was a little boy just about my age. He looked like he had been scared to death.”

No white person was ever arrested in connection with the massacre.

For nearly 80 years, the city of Tulsa was haunted by silence over what had happened. Black survivors who’d returned to rebuild kept quiet about the massacre. City leaders, calling the rampage an embarrassment, covered it up. At the University of Tulsa archives, someone used a razor to excise stories about it from magazines. The *Tulsa Tribune* article claiming that Rowland had assaulted Page was torn out of the newspaper, as was the editorial “To Lynch Negro Tonight.”

Yet the story of the massacre could not be erased, says Goodwin, the Oklahoma state representative. “The souls remain and we honor them, but these were generations that could have been born, and we don’t have them. Those folks were killed, murdered, burned, and shot; those were people. We lost daddies, mamas, and babies. They were murdered, and it was arson, and no one was ever charged. No one was ever convicted, and no one was ever held accountable. And we will not forget.”

V.

IN 1997, 76 years after the massacre, Oklahoma opened an investigation into what happened. Don Ross, a state legislator whose grandfather had survived the violence, authored a bill that created the Tulsa Race Riot Commission in response to a local reporter who had called the 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City, which killed 168 people, the worst civil unrest since the Civil War.

“My father stated to the reporter, ‘No, the worst to occur was just an hour away from the State Capitol, in Greenwood,’” J. Kavin Ross, the son of Don Ross, told me. “That is what started the story.”

J. Kavin Ross, a journalist in Tulsa, worked with the commission, interviewing and videotaping more than 75 survivors. It was haunting “to hear the stories from them, from a child’s



perspective. Many were five, nine, 10, and some were teenagers at the time,” he said. “It was something locked in their psyche all this time. They’d say, ‘I remember something else. Come back and interview me again.’”

In 1998 a team led by Scott Ellsworth, whose new book *The Ground Breaking: An American City and Its Search for Justice* recounts the cover-up and investigation of the massacre, identified three locations where there might be mass graves: Newblock Park (a dump in 1921), Booker T. Washington Cemetery, and Oaklawn Cemetery. Underground anomalies discovered with ground-penetrating radar at Newblock Park were discounted upon further investigation, but eyewitness testimony from Clyde Eddy, a white Tulsan, expanded the search at Oaklawn.

“A cousin of mine, we passed down by the old Oaklawn Cemetery,” Eddy told the commission in 1999. “We saw a bunch of men working, digging a pit, and we saw a bunch of wooden crates lying around. We went and took a look. We walked up to the first crate, and there were

bodies of three Blacks. The next crate, it was much larger, and there were at least four bodies in it.”

A team examined the Eddy site with ground-penetrating radar, electromagnetic induction, and a magnetometer and discovered an anomaly bearing “all the characteristics of a dug pit or trench with vertical walls and an undefined object within the approximate center.” Yet the area had been reserved for white burials in 1921.

The commission decided not to authorize a physical search, and Susan Savage, Tulsa’s mayor at the time, closed the investigation before scientists could dig, saying she did not want to disturb nearby burials.

The search seemed over. But in 2018 I wrote a front-page story in the *Washington Post* that questioned the ending of the investigation. I had traveled to Tulsa to visit my father and noticed that development was gentrifying Greenwood—a place that survivors’ descendants consider to be the sacred ground of the massacre. A few days



Injured survivors filled the beds in Tulsa’s temporary Red Cross hospital. “While the records show 763 wounded,” the relief agency reported, “this does not include wounded people afterwards found on practically all roads leading out of Tulsa.” Phoebe Stubblefield’s great-aunt lost her home in the attack. Now the forensic anthropologist (above) will help identify the remains of victims found in mass graves.

LIBRARY OF CONGRESS (LEFT)

after the story was published, the city’s mayor, G.T. Bynum, announced that he would reopen the investigation and search for mass graves.

“If there are mass graves in Tulsa, we should find them,” Bynum told me. “If you get murdered in Tulsa, we have a contract with you that we will do everything we can to find out what happened and render justice. That’s why we are treating this as a homicide investigation for Tulsans who we believe were murdered in 1921.”

Bynum, a white Republican, acknowledged that the city had covered up the massacre for nearly a century, but as mayor, he promised to follow the truth. “It’s more important for me to be on the right side of history,” he said.

Even so, today he’s facing pressure from all sides. Some white people have confronted him, saying he should leave the past buried. Black residents descended from survivors, meanwhile, continue to demand a thorough search for mass graves as well as reparations for the wealth that was destroyed.

In 2019 the city formed a committee of

High school senior Brandi Ishem poses in front of a mural celebrating Black Wall Street, as Greenwood came to be known. Painted in 2018, the artwork adorns a support wall for Interstate 244, which now cuts through Greenwood, splitting it in two. The mural, a reminder of what's possible, is a popular spot for senior portraits.



descendants, researchers, and community activists. At their request, a group of experts, including archaeologists, historians, and forensic anthropologists, used ground-penetrating radar to look for evidence of anomalies at the 1999 sites.

Led by the Oklahoma Archeological Survey based at the University of Oklahoma, the team searched Oaklawn Cemetery and Newblock Park while the city negotiated for access to a third site, the privately owned Rolling Oaks Memorial Gardens, formerly Booker T. Washington Cemetery. On December 16, 2019, the scientists announced they had found anomalies beneath the ground at Oaklawn and in an area of Tulsa called the Canes, now a homeless encampment, near where the I-244 freeway crosses the Arkansas River.

VI.

OAKLAWN CEMETERY, Tulsa's oldest existing public burial ground, is just blocks from Greenwood. At the entrance, a map still shows the dividing line between the "white" and "colored" sections.

In July 2020 the scientists broke ground in a "colored" section called the Sexton Area, a plot marked by pink crape myrtle trees. After eight days of digging, the scientists hadn't found a mass grave. The city decided to expand the search.

Three months later, on October 19, 2020, a second excavation began, concentrating on an area that researchers called the "Original 18" site, where officials suspected 18 Black people had been buried in 1921.

Two days later, scientists located the remains



of a trench under a tree near the tombstones of Reuben Everett and Eddie Lockard, the only marked graves of known massacre victims in the cemetery. The pit contained at least 11 coffins.

“This constitutes a mass grave,” state archaeologist Kary Stackelbeck told reporters at a news conference in Tulsa. But she said more research is needed to determine whether the bodies belonged to victims of the massacre.

Signs of trauma, gunshot wounds, or burns could connect the bones to the massacre, says Phoebe Stubblefield, the forensic anthropologist who would examine the remains. But Stubblefield, whose ancestors survived the violence, says that before she can do that, the city must obtain permission from a judge to exhume the remains. The burial site may contain many more coffins stacked on top of each other.

“We could be looking at more than 30 individuals interred in this mass grave,” Stackelbeck says. Steps had been cut into the hard soil, she says, “presumably to get in and out of the grave shaft.”

It’s unlikely the gravediggers would have gone to that trouble to bury only a few people.

VII.

EACH WEDNESDAY before Bible study, the Reverend Robert Turner, pastor of Vernon African Methodist Episcopal Church—one of the last original structures in Greenwood—walks to City Hall to protest the massacre and demand reparations.

“Black people were murdered in this city, killed by mass racial terror,” he shouts. “Innocent lives were taken. Babies burned. Women burned. Mothers burned. Grandmothers burned. Grandfathers burned. Husbands burned. Houses burned. Schools burned. Hospitals burned. Our sanctuary burned. The blood of those killed in Tulsa still cries out.”

But when news of the discovery reached him, Turner sank quietly to his knees at the cemetery’s wrought-iron fence and prayed.

Kristi Williams went to the cemetery too. The mass grave had been discovered where she and other Black activists had staged a “die-in” in 2019 to bring attention to the search for massacre victims.

She and a dozen others had lain down on the grass near the two marked tombstones of known riot victims. Suddenly, two of the protesters—J. Kevin Ross and Tiffany Crutcher, a community organizer—leaped up.

“They felt something pull on them from the ground,” Williams told me. “We thought they were being silly. But when we got the news they found a mass grave, it came full circle to me. Our ancestors have been crying out, and that’s where they were.”

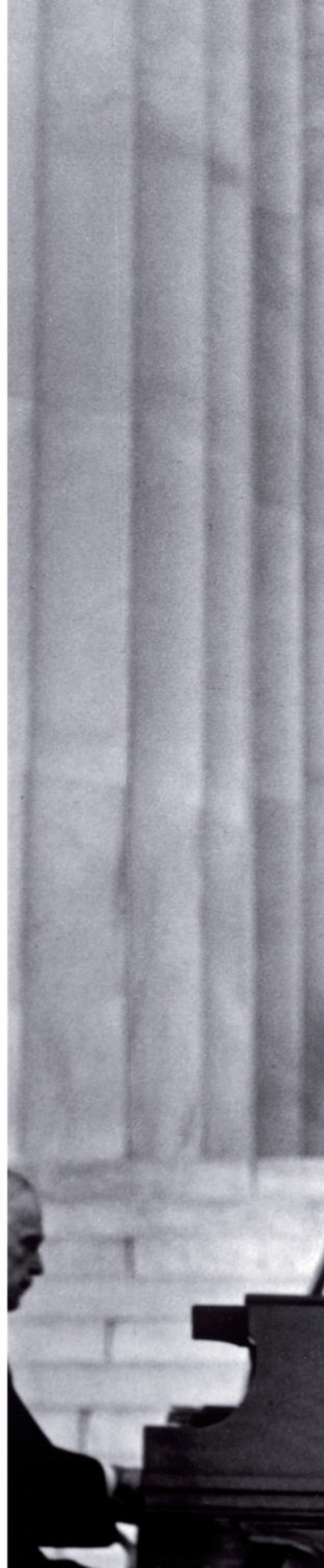
At the cemetery’s border, Williams poured a water libation and prayed: “Ancestors, thank you for crying out to us. It is my prayer that we connect you all with your families and that you guide us through this process for justice. I’m so sorry this happened to you.” □

DeNeen L. Brown, a native of Oklahoma, has written extensively about the race massacre. **Bethany Mollenkoff** chronicled her pandemic-era pregnancy for National Geographic.

ESSAY BY **ELIZABETH ALEXANDER**

ENVISIONING BLACK FREEDOM

We must live like we understand
what history teaches us.



RECKONING WITH THE PAST

Before an integrated crowd of 75,000, Marian Anderson sings on the steps of the Lincoln Memorial on Easter Sunday in 1939. Though a renowned classical singer, Anderson wasn't allowed to perform at Constitution Hall, a venue the Daughters of the American Revolution owns, because she was Black.





RECKONING WITH THE PAST

Police officer Eugene Goodman holds off insurgents storming the U.S. Capitol on January 6, in response to then president Donald Trump’s false claims of election fraud. Many rioters displayed white supremacist symbols; the attack left seven dead, 140 injured, and an estimated \$30 million in damages.

I.

On June 27, 2015, Black artist and activist Bree Newsome Bass climbed the flagpole at the South Carolina statehouse and took down the Confederate flag that had flown above the people of that state for over 50 years. This act came 10 days after a white supremacist murdered eight Black parishioners and their pastor at Emanuel African Methodist Episcopal Church in Charleston. Grown from a congregation first organized by enslaved and free Blacks in the late 18th century, Emanuel is the oldest African Methodist Episcopal church in the American South. It is a church where Black freedom has been envisioned and practiced throughout the entirety of its existence, from the 19th-century congregant Denmark Vesey—who bought his own freedom and helped plan a revolt of his fellow human beings who were still enslaved—to the 20th-century civil rights marchers and leaders who regularly gathered within its sacred space.



Bree Newsome Bass removes the Confederate flag from the flagpole in front of South Carolina's statehouse in Columbia in 2015.

"In the name of Jesus, this flag has to come down," the activist called to police below. She was arrested on a charge of defacing a monument.

ADAM ANDERSON, REUTERS



As she expected, Newsome Bass was arrested as soon as she rappelled down the statehouse flagpole, Confederate flag in hand. Her act memorialized Emanuel’s pastor and parishioners. It also made an ephemeral but indelible monument to Black freedom.

When asked why she did what she did, Newsome Bass answered, “I did it because I am free.”

What does it mean to be Black and free in a country that rejects Black freedom?

II.

I AM AN EDUCATOR who teaches students about submerged histories, revelatory art, and the critical thinking that sharpens questions that move us toward truth. I am a poet, and my poet’s tool is the word. The word is holy and bears the heft

of human experience; the poet must wield it as precisely as possible. I have found that writing poems brings me closer to understanding my fellow human beings—individually and in community—in our many contradictions and complex histories. Poems give form to truths and understandings that might otherwise be lost.

As leader of the Andrew W. Mellon Foundation, I am privileged to help support artists, thinkers, researchers, and other kinds of builders who illuminate stories and experiences that have often been hidden, overwritten, or mistold.

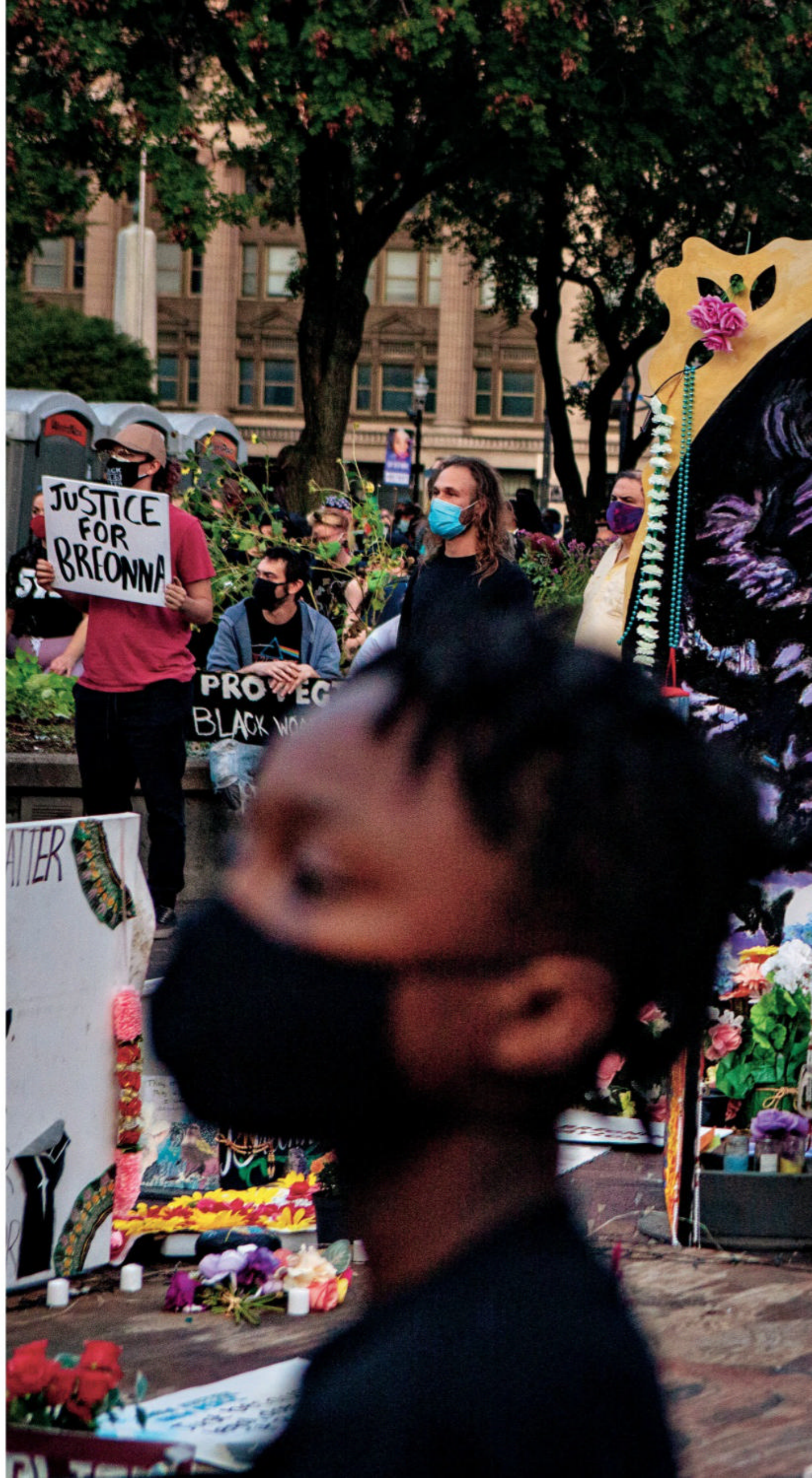
In a year darkened by loss, their light shone with particular power through the work we are supporting with the largest initiative in our history, the Monuments Project.

We have found inspiration in monuments like artist Judith Baca’s “Great Wall of Los Angeles,”

RECKONING WITH THE PAST

In Louisville, Kentucky, a mother and son pass by a mural of Breonna Taylor during a September 2020 demonstration to demand justice in Taylor's death. Taylor, 26, was fatally shot in her home in March 2020 during a botched raid by police. No officer has been charged with shooting her.

JASON ARMOND,
LOS ANGELES TIMES
VIA GETTY IMAGES





A sign riddled with bullet holes marks the spot where, in 1955, 14-year-old Emmett Till's mutilated body was pulled from Mississippi's Tallahatchie River. Two white men lynched Till for allegedly flirting with a white woman. Site markers such as this one were defaced and replaced repeatedly until 2019, when a 500-pound steel sign—bulletproof and indestructible—was installed.

EMMETT TILL INTERPRETIVE CENTER



a vibrant mural more than half a mile long that has brought together dozens of community members over 40 years to paint a richer, more inclusive history of California.

We supported a new memorial to Emmett Till, the 14-year-old Black boy from Chicago who, when visiting family in Mississippi in the summer of 1955, was kidnapped, tortured, and murdered by two white men for allegedly whistling at a white woman. His mother brought his body back to Chicago for an open-casket funeral to “let the people see what they did to my boy,” and *Jet* magazine published photographs that would widely spread the word of a terrifying story that was not isolated.

Till became an emblem of the racist violence that Blacks were still subject to and helped to catalyze the civil rights movement. The site

sign that marks where his body was pulled from the Tallahatchie River in Mississippi had to be replaced many times because it was riddled with bullet holes.

As an educator and fieldbuilder in African American studies, I believe that the knowledge from this field sits at the center of any genuine understanding of the United States, holding the legacy and ongoing existence of anti-Black enmity in its unflinching gaze alongside the knowledge, philosophy, and creativity that emerges from this American history of struggle and endurance.

The lynching of Emmett Till and the mass murder of the Emanuel parishioners—among countless other acts of anti-Black terrorism down through the generations—underscore this truth about our country: It was built in part, and is still being built, on anti-Black hatred and violence.



How do we move forward with this contemptible knowledge and its antidotes as our guides?

III.

ON JANUARY 6, 2021, domestic terrorists carried out a violent insurrection at the United States Capitol. Incited by the president and some in the U.S. Senate and House of Representatives, this armed and organized mob brutalized law enforcement; killed a police officer; terrorized democratically elected representatives, their staffs, and some of their family members; assaulted journalists; erected a gallows; looted offices; stole documents and laptops, including that of the speaker of the House, which the thief allegedly planned to sell to Russian agents; smeared human feces through the building; and

extensively defaced commemorative displays and works of art, including a memorial placard to Congressman John Lewis, the recently deceased civil rights icon.

Also on that day: A Confederate flag, which had never before breached the heart of Congress, was waved in its halls by one of the terrorists. This flag memorializes white supremacy, commemorates the lost cause of those who fought a war to keep Black Americans enslaved, and instructs race-based hatred.

After hours spreading savagery and chaos through the halls, the terrorists were largely allowed to depart the Capitol unfettered. Photographs showed Black and brown custodial workers cleaning up the wreckage the mob left behind.

IV.

YEARS AGO, I wrote a series of sonnets in the voices of young Black women who studied at Quaker educator Prudence Crandall's school in Canterbury, Connecticut, in the 1830s. White parents pulled their daughters from the school because they did not want them educated alongside Black students, but Miss Crandall continued educating those young Black women and girls despite the violent opposition of Canterbury's white residents. Those residents ultimately burned the school to the ground. Miss Crandall's unwavering courage could not keep the schoolhouse safe. But in the sonnets' vision, the rare quest for education for Black women was "the one perfect religion" that the townspeople could not destroy.

Without learning, without knowledge, without the voices and the experiences and the insights gained from a determined excavation of our country's past, we will never eradicate racism and racial violence. If we are to stop weaving white supremacy into the fabric of our country, then we must learn our full histories. We must live like we understand what that history teaches us.

In a poem, I once portrayed the great poet Robert Hayden in the 1940s as he dedicated himself, "stoop-shouldered," to sifting through the records of the slave ship *Amistad*, extracting history's hidden insights and the story of resistance from that ship's log. "Blood from a turnip," I wrote of his daunting and exhausting process of deep research to tell the story of "this / protagonist-less / Middle Passage" from the perspective of the captives rather than solely that of the captors.

Ultimately the “slavers’ meticulous records” revealed the determination of the Africans on board to resist being dehumanized as property. That gave Hayden, in turn, the knowledge he needed to tell us the story too few had contemplated: that there were many Black people who challenged slavery as their fate and fought back for their freedom, as well as white people who were their allies.

To return to Miss Crandall: After her school was destroyed, in 1834, one of her students, a young Black woman named Julia Williams, moved to New Hampshire to study at an integrated school. There, as in Canterbury, the act of teaching Black and white children together drew a violent response from white people in the community. I researched the history and then described, in the conjured voice of Miss Williams, an unforgettable true scene:

*From the town and neighbors came
three hundred armed men, ninety oxen teams.*

*They dragged the school building utterly off
its foundation. I have twice seen bloodlust
and ignorance combust. I have seen it.*

Bloodlust and ignorance combust. I continue to return to those words.

V.

NEW YORK CITY, where I was born, is a city that exists in the mind and in the matter-of-fact corporeality of day-to-day New Yorkers as one definition of freedom—freedom of expression, freedom of belief, and the power of a multicultural metropolis.

The identity emerges from complexity. More enslaved Black people lived in New York City in the 1700s than in any city other than Charleston, South Carolina. Many free Black people lived in New York as well, in places such as Seneca Village, where residents were forced out by eminent domain in 1857 before the community was razed to build Central Park. Those enslaved and free Black people’s stories still speak to us through material clues such as the coins, beads, coffins, and shrouds left behind in subterranean sites like the African Burial Ground in Lower Manhattan.

In Brooklyn, in 2001, five corncobs laid out in a distinct shape were found in a crawl space of a house. Those corncobs formed a star, scholars determined, that suggested a West African

cosmogram, one that conveys two worlds of the living and the dead, both eternally connected in a West African vision of the cosmos in diaspora.

When I read about that archaeological discovery, I envisioned the moment when the rumor of freedom was made real, in a poem called “Emancipation”:

*Corncob constellation,
oyster shell, drawstring pouch, dry bones.*

*Gris gris in the rafters.
Hoodoo in the sleeping nook.
Mojo in Linda Brent’s crawlspace.*

*Nineteenth century corncob cosmogram
set on the dirt floor, beneath the slant roof,
left intact the afternoon
that someone came and told those slaves,*

‘We’re free.’

Imagine, the revelation of freedom—two words, “We’re free.” We are still enacting and imagining the aftermath.

VI.

IN MID-CENTURY LOS ANGELES, in the Watts neighborhood, an Italian immigrant named Simon Rodia built an extraordinary structure by hand. The Watts Towers soar toward the sky in multiple forms, nearly a hundred feet tall at the highest. Rodia envisioned and built the towers day by day over three decades, from durable steel and delicate wire mesh, bottle glass, white sea-shells, pottery shards, mint chip and maraschino mosaic tiles, shades of lapis lazuli, cobalt, and the thick, bright yellow of a crayoned sun. Like the “corncob constellation” left behind in the crawl space of the house in Brooklyn, each seemingly mysterious object carries power and meaning.

“It shows that we are people too, that we have brains and we can make it too if we put our minds to it,” Carolyn Byers, a young woman from Watts, said of the towers. She was talking to a reporter in 1991, the year Rodia’s vision was designated a national landmark; six months before that, a Black man named Rodney King was brutally beaten by white police officers in the San Fernando Valley, and the officers’ subsequent acquittal sparked five days of riots across South Los Angeles.

Rodia moved to Watts about a century and a half after the Spanish founded the pueblo

that became Los Angeles. Many of the Gabri-elino-Tongva peoples who were the first inhab-itants of the Los Angeles Basin were forced into enslaved labor at the region’s Spanish mis-sions. By 1848 the part of Tovaangar that would become Watts had passed from the Spanish Empire to the Republic of Mexico and then was taken, along with more than half of Mex-ico’s territory, by the aggressively expansionist United States at the conclusion of the Mexican-American War.

Rodia lived in the community as it changed from one populated mostly by whites and Mex-ican Americans to a home for African Americans who had left the South in the Great Migration. By the time he completed the towers in 1954, the Watts community was predominantly Black; today, one full century after he first put his hands to steel at East 107th Street, it is majority Latinx, including large communities of Mexicans and Salvadorans. Throughout this time—through-out Los Angeles—descendants of the Gabrielino-

July, we’d lay out blankets in the humid evening and listen to the U.S. Marine Band as fireworks exploded overhead in the summer deep darkness.

The Library of Congress was my childhood library because the Library of Congress is a pub-lic library. In high school I would research and write my papers there. Sitting in the glorious rotunda, I would think with excitement how the very building in which I learned held almost every single book on Earth. Anyone who walked through the doors had access to them.

I knew that the Capitol was where the actual business of our country’s governance took place and that it stood gleaming as both a symbol and a site for working out the complexities of millions of different people, with all their beliefs and back-grounds and experiences, living alongside one another in an ever evolving democratic experi-ment. My parents taught me that the Capitol was built by enslaved Black people, and that reverence for a space that was ours did not erase under-standing voter suppression and the three-fifths

Monuments are places where people come together
TO HELP IDENTIFY A NEW DIRECTION AND TO MAKE A WAY FORWARD,
even when the way forward is shaped by grief.

Tongva peoples have continued to live in and honor their ancestral homeland. None of these complexities contradict; we must understand them together.

I have always been so moved by the inspira-tional power and seeming impossibility of the towers that I described them in the poem “Stra-vinsky in L.A.”: “The Watts Towers aim to split / the sky into chroma, spires tiled with rubble / nothing less than aspiration.”

To aspire: from the root meaning, fundamen-tally, “to breathe.”

VII.

WHEN MY FAMILY moved to Washington, D.C., from Harlem in late 1963, many parts of the city were racially segregated. I grew up a few blocks from the U.S. Capitol. My family and I would reg-ularly stroll its meticulously tended grounds and sometimes picnic. Most years on the Fourth of

compromise. They showed me how to hold seem-ing contradiction with a comprehension of our full history.

At the Lincoln Memorial, the towering marble form of the 16th president might make a child feel dwarfed, just as it made me feel as a child. But I want the child of today to understand that this figure is not merely a shadowing stone statue. It is also a site of powerful community gathering and activation. As the central location of the 1963 March on Washington and Martin Luther King, Jr.’s “I Have a Dream” speech—and so many marches to follow—the Lincoln Memo-rial is one of the most significant sites of civic action in our history. When Marian Anderson sang “my country, ’tis of thee” on its steps in 1939, she rebuked the segregation that had barred her from singing in Constitution Hall before the Daughters of the American Revolution.

Monuments and memorials are places where people come together to remember, to



RECKONING WITH THE PAST

A crowd in Minneapolis in May 2020 protests how George Floyd died: with a police officer kneeling on his neck. Floyd's death sparked a reckoning that has included protests in more than 2,000 U.S. cities—and in others around the world—against police brutality and racial injustice.



collectively mark a moment, to be a “we,” to help identify a new direction, and to make a way forward. This is the case even when the way forward is shaped by grief and not by joyful determination. The Vietnam Veterans Memorial, designed by the artist and architect Maya Lin when she was just 21 years old, introduced into the D.C. of my young adulthood a memorial that had no precedent in the D.C. of my childhood. This slash into the earth bears no figuration. It holds instead the ephemeral reflections of those who walk down into the ground to mourn their dead, evoking the true cost of all wars. It does so even as it raises unarticulated questions about the millions of Southeast Asian people who also were killed in that particular war, and whose names are not recorded on the memorial’s black granite.

What would it mean for us to have monuments and memorials that do not teach us to memorialize war or to commemorate fighting against others? What would it mean to enact the enduring spiritual’s words, “I ain’t gonna study war no more,” in our monuments?

VIII.

TELL THE WHOLE DAMN TRUTH, in our history, our art, our words, and our memorials.

Mighty civil rights and voting rights activist Fannie Lou Hamer’s words are the simple truth: “Nobody’s free until everybody’s free.” Fighting for Black freedom means, in the words of Robert Hayden, “visioning a world where none is lonely, none hunted, alien.” It means understanding 19th-century Black enslavement alongside 21st-century Black mass incarceration; comprehending why Emmett Till’s casket is the most sacred object in the National Museum of African American History and Culture; acknowledging the horror of George Floyd’s and Breonna Taylor’s murders standing in seemingly never ending seriality with so many other murders. Fighting for Black freedom means centering the crucial questions raised by decades and decades of African American studies; they are still the right questions. And recognizing that the bravery of Bree Newsome Bass in June 2015 is more powerful than the violent desecration of the U.S. Capitol in January 2021.



In Los Angeles's mostly Black Watts neighborhood in 1965, during a six-day conflict that left 34 dead, a sign put up by National Guardsmen at a barricade warned residents, "Turn left or get shot." The conflict began after a traffic stop by police became violent. Today the community—now mostly Hispanic—continues to look up at the Watts Towers, soaring works of public art that were completed in 1955 and are said to symbolize freedom and transcendence. Built over three decades by Italian immigrant Simon Rodia, the 17 towers are an example of *art brut*—art crafted by those at the margins of society.

BETTMANN ARCHIVE (LEFT);
ANN JOHANSSON, CORBIS VIA
GETTY IMAGES

Most days I play or hear in my head Nina Simone's 1967 version of the Billy Taylor song, "I Wish I Knew How It Would Feel to Be Free." The song has light and delight; it is singable, and in one facet, joyful. But the "wish" is both a commanding action—wish it, make it happen—as well as a word that says we're not there yet. The conditional tense, "would," marks that freedom is not fully attained.

The song's bright music moves us ever forward. But Simone's voice, in all its coloration and nuance, the dark side it carries in its light, reminds us that freedom—the right of every one of us—is a process. Freedom is work. Freedom doesn't come by wishing. We must vision it. And we have survived by enacting those visions. □

Elizabeth Alexander—poet, educator, memoirist, scholar, and cultural advocate—is president of the Andrew W. Mellon Foundation. She is the author or editor of 14 books and twice was nominated for a Pulitzer Prize; her book *The Trayvon Generation* is to be published this fall. She wrote the poem "Praise Song for the Day" for Barack Obama's presidential inauguration in 2009 and delivered it there.



Of the trillions of trees on
this warming planet, which
one grows the farthest south?

Our team braved the furious
winds of Cape Horn to find it.

THE TREE AT THE

A full-page photograph of a mountainous landscape. In the foreground, two hikers are visible, partially obscured by a dense thicket of gnarled, leafless trees. The hiker on the left wears an orange jacket and a green backpack, while the hiker on the right wears a green jacket and a green backpack. The background features rolling hills and mountains covered in low-lying vegetation, under a cloudy sky.

BY CRAIG WELCH
PHOTOGRAPHS BY IAN TEH

BOTTOM OF THE WORLD

Seven trees sprout on a hillside near the southern tip of South America, above the treacherous swirl of spray where the Pacific Ocean meets the Atlantic.

It's not an impressive bunch—just a tangle of gnarled limbs and silver bark hidden by reedy grass. A few are dead. None reaches higher than my thigh. The living bend and curl their way a dozen feet across the ground, like soldiers clawing through battlefield mud. Furious winds have driven the trunks completely horizontal.

It's hard to square these scraggly specimens with the exceptional lengths we've gone to in order to find them. We've flown across oceans; chugged 32 hours by ferry; motored 10 hours more on a wooden charter boat captained by a sailor who confessed mid-journey that he'd never navigated this deadly stretch of sea. Only then did we reach our destination—Isla Hornos, the island where Cape Horn is located, the last land in Tierra del Fuego. There we hiked through gales that knocked us down, slipped on penguin guano, and vanished to our armpits in thickets of barberry.

We've come all this way to map a border no scientist has mapped before. We've come to find Earth's southernmost tree.

"This is it," says Brian Buma, a forest ecologist at the University of Colorado Denver. He's draped head to toe in orange and black rain gear. Straddling hummocks, he rechecks his compass and mutters, "Cool."

Few things in the natural world can be identified as the true end, the last of a kind, the edge, Buma tells me. He pulls a measuring tape from his daypack and starts appraising one recumbent trunk, a few inches south of the rest.

"It strikes me that we should know where these things are," he says.



IN THE 21ST CENTURY it can seem as if there are no places we've not surveyed down to the last inch. We take selfies on the world's tallest mountain, pilot submarines to the oceans' deepest trench, explore the planet's driest deserts. But we've never identified—at least not correctly—the final stands of trees at the top or bottom of the world.

Now forests are on the move. As the climate warms, tree lines are moving higher up mountains, and tree species also are extending their ranges toward higher latitudes. As trees move, ecosystems change. In Alaska longer growing seasons now let willows get so big they poke through snow in winter. That has drawn moose and snowshoe hares from the Brooks Range all the way to the Arctic Ocean. The Arctic and parts of Antarctica are among the fastest warming regions on Earth.



The National Geographic Society, committed to illuminating and protecting the wonder of our world, has funded Explorer Brian Buma's work on how the Earth's ecosystems are changing.

Forest ecologists Brian Buma (at left) and Andrés Holz scan the grassy ledges of Cape Horn's headwall on Isla Hornos, the last point in South America where a tree might grow.

PREVIOUS PHOTO

Searching for Earth's southernmost tree, scientists traverse windswept Isla Hornos. They sometimes had to walk on top of thick trees and shrubs, moving gingerly to avoid sliding into steep ravines.

But most of what we know about these grand ecological shifts comes from research north of the Equator. The global south, Buma says, is often neglected.

Thumbing through old botany books and explorers' journals, he saw an opportunity: They contained a bewildering assortment of claims for the whereabouts of the global south's last woods. If he could find the southernmost tree, it could become the focal point of a living laboratory that scientists could visit for years to come. They could monitor soil warmth and tree growth. They could study the animals living in this ecosystem on the edge. Over time they could track whether that edge was moving.

But first Buma would have to find the tree. And finding anything in the archipelago that brushed back Charles Darwin and nearly broke Captain Bligh wouldn't be a walk in the woods.

Just getting near it would be hard enough.

BUMA PREFERS SCIENCE that mixes sleuthing with adrenaline, ideally in hard-to-reach forests, in miserable conditions. Once, in Alaska's Glacier Bay National Park, he kayaked icy fjords in pouring rain and pawed through head-high shrubs thick with brown bears—all just to locate some minuscule research plots no bigger than couch cushions. They'd been set up in 1916 by a botanist named William Skinner Cooper. The plots had become overgrown and were lost to science until Buma pulled Cooper's hand-drawn maps from dusty archives. Now they provide a century-long record of how plants take over ground uncovered by retreating glaciers.

Buma recounts that adventure from a seat on the cargo ferry *Yaghan*. Along with photographer Ian Teh and a collection of old trucks and



Magellanic penguins skitter onto the island's rocky shore and head toward their colonies after a day of fishing. Researchers pushing through dense vegetation sometimes slipped on guano left by penguins waddling up the same muddy gullies.





bed frames, we're chugging through the Strait of Magellan beneath slate skies on a January afternoon. Outside, ice-blue glaciers spill down the flanks of the southern Andes. Macaroni penguins crowd boulders near shore. We're on a day-and-a-half run from Punta Arenas to Puerto Williams, Chile, South America's southernmost city. There we'll rendezvous with a smaller boat.

Tall and sunburned, in a flannel shirt and too-long canvas work pants, Buma is in high spirits—a detective off to untangle a new mystery. With a National Geographic Society grant, he and Chilean ecologist Ricardo Rozzi have assembled a crew that hopes to study the south's terminal forest. One researcher will try to record bats. Two others will scale trees to study the canopy. An archaeologist plans to sift through sands for signs of early human settlement. And a small team will help Buma spot his tree.

Buma opens a sketchbook to a drawing of our destination. In the austral twilight it resembles a pirate map. Buma confesses he'd briefly considered hunting for the planet's northernmost tree—most likely a larch in central Siberia—but that's too large a region to search. He wanted to be certain, Buma says, "we could find an answer and be sure we were right."

IN THE SOUTHERN HEMISPHERE there's far less ground. Antarctica was forested tens of millions of years ago during the Eocene epoch, when the planet was warmer, but no trees live there now. The ocean around it is dotted with islands, some of which sprout rushes, forbs, and grasses, but they too lack trees. The islands have been surveyed repeatedly since James Cook pronounced South Georgia island treeless in 1775.

Scouring the internet, Buma found claims



LEFT

On the island's eastern shore, Buma, the expedition leader, pokes his head into an old chapel to check on some team members who have taken refuge from one of the storms that regularly pummel the cape.

ABOVE

The team met the only full-time inhabitants of Isla Hornos, Chilean naval Petty Officer Andrés Morales and his family. Morales was on a one-year tour of duty, tending a lighthouse that overlooks Drake Passage and providing weather reports to passing ships.

Overheard at National Geographic

Listen as writer Craig Welch recounts the search in "The Tree at the End of the World," in season three of our podcast.

literally all over the map. One website suggested the world's southernmost tree was on Navarino Island, where Puerto Williams is, at least 45 miles north of Cape Horn. Another put it on Hoste Island, 35 miles northwest of the cape. A journal article from the 1840s based on a dispatch from botanist Joseph Dalton Hooker, who sailed with H.M.S. *Erebus* and H.M.S. *Terror*, concluded confidently: "Hermite Island may be considered the most southerly spot on the globe where any thing like arborescent vegetation is to be found."

But Hooker never visited the island just south of Hermite, the one in Buma's sketchbook: Isla Hornos. At the time of our journey, Wikipedia dubbed it "entirely treeless." Why would there be trees on Hermite but not on Isla Hornos, a few miles away? Buma wondered.

When he made his case to Rozzi, the Chilean was enthusiastic. Rozzi "was like, 'Oh yeah, I've been there,'" Buma recalls. "'There are trees.'"

In Puerto Williams, where Rozzi oversees a research station operated by the University of Magallanes, we load our gear onto the *Oveja Negra*—*Black Sheep*. The 65-foot cruiser fashioned from cypress is piloted by Rozzi's frenetic, wild-haired cousin Ezio Firmani, a former chef. Soon we're cutting south through the Beagle Channel, named for Darwin's ship. The captain



THE THING THEY CAME FOR

The world's most southern tree was found on Isla Hornos, not far from Cape Horn. It was in a group of seven trees on a hillside that offered a bit of shelter from the punishing winds.

bubbles with excitement—"I've never rounded the cape!" he shouts. My stomach groans.

Cape Horn is a massive prow, a knobby headland that plunges roughly 1,300 feet to the sea from the southernmost flank of Isla Hornos. South of there lies a band of ocean that stretches uninterrupted around the planet. Furious westerlies drive the sea surface into giant rollers called graybeards. When those huge waves hit the shallow continental shelf, they produce some of the planet's most menacing seas. Now and then, icebergs wander in on foaming waters.

For centuries sailors have died "rounding the Horn," especially moving east to west against the winds. In 1788, before his crew's infamous mutiny, William Bligh of H.M.S. *Bounty* tried for a month and failed to negotiate this turn. In 1832 "great black clouds" unleashed "extreme violence" and beat back Darwin.

As we head for the cape, Buma opens his notebook to a sketch of the promontory. The most southern spot where his tree could be is there, springing from a ledge hundreds of feet up. That's why Buma brought ropes, climbing gear, and John Harley, a seasoned mountaineer.

Harley's prepared to lead us to it, if necessary. "It could be fun," Buma says. I'm not sure I agree.

TEN HOURS FROM PUERTO WILLIAMS, the rain comes out of suddenly darkening skies. The captain is nervous. A rager is on its way, but we're finally off the east flank of Isla Hornos. While Firmani considers ducking into a sheltered bay, Buma tells us to get ready. If we don't make land now, we could be stuck on board for days.

An hour later, backpacks stuffed, we file into small inflatable boats and motor to a shallow beach below a bluff. This is not terra incognita: After climbing 160 makeshift steps, we reach a short boardwalk that leads to an old chapel and a lighthouse staffed by a Chilean Navy petty officer who lives here with his family. A few steps beyond is a metal albatross, a memorial to those who've died at sea. On clear mornings a few months a year, cruise ship passengers come to visit. Most stay an hour or less.

None venture where we're headed. The Chilean government keeps the bulk of this island off-limits. Aside from a select few research teams, virtually no one has ventured beyond this soggy sliver in half a century.

Isla Hornos, at roughly 10 square miles, is shaped a bit like a beetle. A prominent ridge runs north to south, ending in a horseshoe-shaped bay. The western arm of the horseshoe rises to the top of the cape headwall. The other curls east to the lighthouse. By late afternoon we're ducking into the wind and trudging uphill in gum boots along that eastern flank, taking a meandering three-mile route west.

At first the walking is easy. But as the land rises, the grass gives way to gnarled, head-high shrubs of holly-leaved barberry and prickly heath. Dense witch-fingered branches make passing between them almost impossible. So we step onto the brush itself.

Moving gingerly, we lurch from one tangle of boughs to another. Over time we rise higher up the shrubs, to keep branches from snapping against our cheeks. I travel hundreds of feet this way, boots never touching ground. Occasionally one foot plunges past waxy leaves to my shin, as if breaking through a snowbridge across a crevasse. A few times I fall nearly to my waist.

We reach a wind-scarred plateau. My rippling jacket sounds like a roaring engine against the howling gusts. We have to shout to be heard. Teh, the photographer, gets blown off his feet.

It has taken an hour to move less than a mile.

Starting down the west side, we step still higher into the shrubs. Eventually we're crunching delicately across the very tops of the barberry. It's not clear if the ground is five feet below or 15. I crash through branches to my throat and have to wait for Teh to pull me free.

At sea level the brush opens enough for us to glimpse sharp ditches, most of them thigh deep, slopped with what we assume is mud. Then we hear a yelp, and someone shouts, "Penguins!" Magellanic penguins have tunneled beneath the brush and are racing underfoot through poop-streaked channels to their colonies.

Finally we hit a wide meadow. Setting up camp, I spy Buma staring west, up a barely visible slope, toward canopies branching above silver bark—the planet's southernmost woods.

EVERY DAY FOR THE NEXT 10, scientists emerge from our half dozen tents and scatter. A Texas researcher scours thin streams for insects. A Chilean ornithologist uses fine nets to catch finches and snipes. Buma, Harley, and Andrés Holz, a Chilean-born forest ecologist from Portland State University, tramp over spongy bogs and mounded cushion plants, looking for trees.

It's not as straightforward as it sounds. There is no widely accepted scientific definition of a tree. One U.S. National Park Service website, for example, claims trees generally are at least 20 feet tall. But that excludes many varieties—some magnolias and junipers, for example—that most people consider trees. Buma's team uses a more intuitive definition: A tree is a perennial plant with a single woody trunk and few or no low branches—whereas shrubs have multiple trunks and low branches.

On Isla Hornos the researchers identify three species: a rare winter's bark and two common southern beeches. Elsewhere, these evergreens rise 65 feet. Here, those protected from wind may reach 30 feet. Most, though, do not. Entire stands aren't much taller than I am.

These dwarf forests are scattered in patches beneath a ridgeline southwest of our camp. After days spent exploring their perimeter, it's clear that locating the southernmost individual won't be easy. If it sprouts from the cape headland, we'll need clear skies to scan the wall—then winds slow enough to climb up or rappel down it. But this is one of the hemisphere's stormiest places.

The last tree also could be at the forest's edge.

But it's more likely to live off alone or in a small cluster, and we may have to comb the ground to see it. A lone tree wouldn't stay vertical for long.

During our stay, the wind gusts to 75 knots—the bottom of the hurricane scale. It shreds one tent and nearly blows another into the sea. We dry clothes on our back by "stationary sailing"—spreading arms and legs and facing the breeze.

We tackle tasks based on weather windows. One overcast afternoon we venture into a stubby grove to gather data. The canopy is so thick and short, we drop to our knees and crawl. Inside we find a mat of electric green mosses and lichens. Above, each tree is bent and bowed in squat spirals like coiled springs. It feels like a world created by J.R.R. Tolkien and compressed from above by a giant hand.

Holz is surprised by the island's lushness. Coring several trunks, he finds their rings nearly white, a sign of explosive growth. "These are very happy trees," Holz says—not what he'd expected from such harsh conditions.

When the mist finally lifts one morning, we hike up the cape headland and peer straight down over the cliff. We scan the glistening ledges and crevices for trunks and saplings. We see nothing, but the angle makes it impossible to rule out arborescent vegetation.

So, more than a week into our stay, on the first sunny dawn, we radio the *Oveja Negra*. After piling again into inflatable dinghies and clambering back aboard, we putter near the cape for the first time. Buma, excited by the prospect of surveying the last tree while dangling from a rope above the roughest seas on Earth, still hopes his quarry is here. I do not.

We bob in swells a few hundred yards east, scoping the rock from the bow. Even from here I can see the breakers smashing below the face. Behind me, Buma sways gently, binoculars up. He still sees no trees.

"Way at the top—that's all grass?" Harley shouts.

"Just a lot of grass," Buma confirms. He turns to me. "But we haven't looked at it all yet."

To do that, we'll have to round the Horn ourselves. Firmani, the captain, prepares to make the treacherous run. In the distance we see whitecaps building. We face the waves and slam through. Firmani, wild-eyed, begins to hoot. The winds pick up, and the boat begins to shimmy. Someone scrambles below deck and gets sick.

Within minutes Firmani turns around. We've



seen what we needed. He's eager to pilot us back to smoother waters. Above, the rock's wet ledges are draped with vegetation. But it's clear there is no tree. To my relief, the carabiners and ropes Harley hauled halfway around the world won't be needed.

BACK ON LAND, Holz and Buma resume their search in earnest. They march a grid pattern along the slope behind the headwall.

Two days later, Buma finds his tree: a snarl of branches poking through clumpy tussock grass. He checks his GPS device. While I stand next to the tree, he walks another grid and finds the next closest one, 17 meters, or 56 feet, to the north. Using me as a marker, he takes readings from both an analog and a digital compass.

Buma walks back, and he and Holz dig in the grass. Instead of a single tree, they count a group

of seven, only some of which are alive. The scientists circle and start chattering.

"We're on a northeast-facing slope, which is probably the best place to be a tree here," Buma says. Holz adds, "It's getting the sunlight and a bit of shelter from the wind."

The southernmost tree is a *Nothofagus betuloides*, a Magellan's beech, a type of tree first collected by Captain Cook's team. Tree rings place its age at 41 years. Its diameter is just under five centimeters, or two inches, and it stands just under two feet high. From there it bends sideways and grows through the grass.

It's no sprawling oak, but Buma is pleased. "This is absolutely amazing," he says.

ABOARD THE OVEJA NEGRA a few days later, we cut back across a placid Beagle Channel, guided for a spell by dusky dolphins. After 11 days of



LEFT

Tree canopy researcher Iván Díaz ascends some Magellan's beech trees. Tucked against a slope and protected from the wind, the trees have grown unusually tall for Isla Hornos, where most trees aren't much bigger than Díaz himself.

ABOVE

In the evenings, the winds that drive deadly tall waves just offshore forced team members to hunker down for meals in the shelter of shrubs and patches of dwarf forest.

pounding wind and rain and squeezing three of us into a two-person tent, I'm ready for a beer and a hot shower. Buma is still giddy. He and Holz have made history. Their work has established a scientific baseline to measure forest migration. It's also just kind of cool.

How much has this place changed as the planet has warmed? We can't say for sure. But Buma and Rozzi will track what comes next. Will it look different in 20 years? Will this tundra-like landscape become one rich forest? Will winds altered by a shifting climate move the forest's edge? Might birds one day ferry seeds to the Diego Ramírez Islands, 65 miles southwest, letting trees take root in places that are now treeless?

Climate change can seem abstract, Buma says, but even schoolkids can understand this process. If he can show them a speck on Google Earth that contains this southernmost tree, it will become more tangible and meaningful.

"The idea has always been, let's find a point, a physical point that people can see, that marks the edge," Buma says. Then we can watch as the planet moves beyond it. □

Senior writer **Craig Welch** wrote the May 2021 cover story on whale culture. **Ian Teh** is a Pulitzer Center grantee examining the impact of development and climate change on China's Yellow River.

Earth's southernmost tree is one in a stand of seven Magellan's beech trees, a few of which are dead. As the planet warms, will forests advance south toward Antarctica? Their progress now can be tracked against a baseline established by this modest specimen.





BY NINA STROCHLIC

PHOTOGRAPHS BY NADIA SHIRA COHEN

CULTURE CLASH

MAYA BEEKEEPERS IN MEXICO

SEE THEIR WAY OF LIFE THREATENED BY
RAPIDLY GROWING MENNONITE FARMS.









Workers in Nuevo Durango, a Mennonite colony in the Mexican state of Campeche on the Yucatán Peninsula, unload soybeans at a silo. Mennonites began arriving in the region in the 1980s and now are the main soybean producers.

PREVIOUS PHOTO

Maya beekeepers say their bees are dying and honey harvests have fallen since Mennonites began planting genetically modified soy and spraying it with pesticides. Transgenic soy is now illegal, but farmers admit that it is still being planted.

‘How did it start?’

asks Everardo Chablé. He’s propped on a stool in his living room as the daylight fades outside. The only noise in this tiny Mexican town on the Yucatán Peninsula—where there’s no cell signal and little electricity—comes from the music his father is blasting in the yard. He speaks up.

“For thousands of years the Maya people had bee culture. Then the Mennonites came with large machines and started to deforest large parts of land where the bees feed. We had virgin forest with very delicate ecosystems—deer, toucans—but most importantly, bees that keep up life. When deforestation started, they destroyed everything from millennia back.”

Chablé, a stocky and serious beekeeper in his late 20s, is describing a simmering dispute that has unsettled this sliver of the Yucatán. Since the 1930s, Maya beekeepers have made this peninsula, site of the temples of their ancestors as well as the largest remaining tropical forest in Mexico, into a world-class honey producer. But since the 1980s, they’ve had to share the region with another tradition-rich—and rapidly expanding—community: Old Colony Mennonites. The most conservative members of an insular religion, these Mennonites speak the Low German of their 16th-century ancestors and eschew modern amenities such as electricity, phones, and cars—but not the tools of industrial agriculture. They have transformed large swaths of Yucatán forest into crop fields.

“On this land, all original plants are gone and animals are gone, and there’s a different species,” Chablé says. “Transgenic soy.”

Beekeepers say that the large-scale agriculture practiced by the Mennonites—and especially transgenic, or genetically modified (GM), soy and the pesticides sprayed to protect it—are killing their hives and contaminating their honey. In 2012 the beekeepers sued the government and won: The Mexican supreme court banned transgenic soybeans four years ago. The win, with its David and Goliath qualities, made international news. But on the ground, little has changed.



 **The National Geographic Society,** committed to illuminating and protecting the wonder of our world, has funded Explorer Nadia Shira Cohen’s work around Mennonites in Latin America since 2019.



In Tinún, Campeche, young mother Beatriz Balán Balán says her grandfather taught her how to keep beehives. Many of his descendants became beekeepers, following thousands of years of tradition on the Yucatán Peninsula.

“If the situation with agriculture keeps developing, we will lose our bees,” Chablé says. “In 20 years everything here will be destroyed.”

THE SLEEPY town of Hopelchén is the epicenter of this conflict. As the agricultural and beekeeping hub of the state of Campeche, it’s the main producer of GM soy in the Yucatán and is home to some 8,000 beekeepers—a third of the region’s total. Cell networks disappear as soon as the town ends, and time rewinds a century. During the day, the plazas of small Maya villages are desolate, their inhabitants deep in the forest tending to traditional farm plots—called milpas—where they grow corn, beans, and squashes. Many keep beehives nearby to pollinate the plants.

The roads turn to dirt at the entrance of the

Mennonite colonies, and the landscape flattens into fields of corn and soybeans. Tractors rumble past single-level farmhouses and lawns strewn with machinery as they make their way to towering silver silos. Leather-skinned men in cowboy hats steer rickety horse carts while children in bonnets bounce in the back. The men give passing vehicles a two-finger wave.

Some 8,000 Mennonites first came to northern Mexico in the 1920s from Canada, where they’d arrived by way of western Europe, Russia, and Ukraine. Since the 1700s, the conservative group has been on the move, skirting military conscription and mandated public education and, more recently, seeking fertile land. In Mexico they were free to keep to themselves.

In the 1980s some left the arid Chihuahua region in the north and gravitated toward the

Encouraged by the Mexican government, Mennonites came to heavily forested Campeche in search of farmland. Since 2002, the state has lost 1.9 million acres of tree cover, according to Global Forest Watch—including this patch outside Hopelchén.





Yucatán, where water was plentiful. There they were able to buy land at cheaper prices, encouraged by federal and state governments, which hoped they would help modernize agriculture. Now more than 100,000 Mennonites live in colonies throughout Mexico.

Starting in 2007, the Mexican government began encouraging soybean production in an effort to reduce its trade deficit. A few years later, it permitted the agro-giant Monsanto to sell GM soybeans, and nearly 150,000 acres on the Yucatán Peninsula were authorized for planting. (Transgenic corn is still illegal in Mexico.) The Mennonites could afford the amount of land and industrial machinery to plant, spray, and harvest GM crops. Traditional as they are, they seized this modern opportunity.

Today about 12,000 Mennonites live in 18 colonies in Campeche, where they control a large amount of farmland. Many avoid driving cars but not tractors or combines. They speak a unique dialect of Low German with roots in 16th-century Prussia. Many of the men also speak Spanish, but fewer women do, since local interaction is confined to drivers and farmhands. The Mennonites produce 90 percent of the region's soybeans.

Honey, meanwhile, is a main source of income for thousands of Maya families. Some 20,000 tons of it leave the Yucatán annually, largely for the U.S. and the European Union. As Mexico was approving GM soybeans, Europe announced that honey shipments would be tested for traces of GM organisms, labeled, and possibly rejected. All this made beekeepers nervous. Then, as they began to observe the effects on their bees, they became furious.

THEY'RE NOT AWAKE YET; we'll wake them," says Leydy Pech, entering a small enclosure in a shady forest, flanked by a group of female beekeepers. A low wooden stand holds a row of hollow logs, each with a tiny hole through which the bees enter. One by one, the logs are sawed open to reveal a golden honeycomb. Bees swarm the air as Pech quickly pries a honeycomb loose and transfers it into a larger log, where it can continue to grow.

The ends of each new log are sealed with mud,

and it's returned to the stand below a swarm of displaced bees. Her hands dripping with honey, Pech nods approvingly as the bees begin to make their way inside. Bees, she notes, have an excellent sense of direction.

Maya beekeepers believe that these native bees, a stingless species called *Melipona beecheii*, are a link to the spirit world and were a gift from Ah Muzen Cab, the god of bees and honey. The bees thrive in the dense foliage that is rapidly disappearing in the Yucatán. Pech, a small woman with cropped hair, and her five-woman collective tend to 80 hives in the forest—they used to have a hundred, she says, until nearby plants were fumigated.

Running alongside the forest's edge are sprawling fields planted, depending on the season, with chilis, corn, or soybeans. Soon after transgenic soy was planted in the state, says Pech's brother, Jorge, he and other beekeepers saw a sharp dip in honey production and an increase in bee deaths. The number of hives needed to make one ton of honey has risen from 12, around 20 years ago, to up to 45 today, Jorge says.

In 2012 Pech's collective and a coalition of other beekeepers sued the government agencies that issued the transgenic soybean permit, saying it was illegal because the Indigenous communities had not been consulted. Other lawsuits were filed at the same time.

Beekeepers argued that their bees travel up to five miles in search of food and thus inevitably are exposed to pesticides sprayed by Mennonite-piloted small planes. In 2012 scientists collected samples of honey from Campeche and published a study showing that soybean pollen was widely consumed by bees. Research in Germany has found that glyphosate, the powerful herbicide sprayed on transgenic soybeans, impairs the navigation of European honeybees, a species also raised widely by Maya beekeepers.

The beekeepers won their case. Monsanto, which has since been absorbed by Bayer, was the only entity with a permit to sell transgenic soybeans in Mexico. The National Supreme Court of Justice banned the sale of GM soybeans in three states, including Campeche, in 2015. In 2017 SENASICA, the Mexican agency responsible for enforcing food safety, fully revoked the permit throughout Mexico. Monsanto says it destroyed its inventory of transgenic seeds and stopped selling them in Mexico. According to SENASICA, a recent sampling of soybean seeds in Campeche

This story was partially funded by the International Women's Media Foundation.

revealed only traces of GM material. A spokesperson says the survey did not identify any fields planted entirely with GM soybeans.

But today, Mennonite farmers admit they are still planting transgenic soy in Campeche, and they're still spraying it with glyphosate from the sky and from the ground.

"Legally speaking, things were going well, but in reality things are very different," says Naayeli Ramírez-Espinosa, an Indigenous rights lawyer who worked on the beekeepers' case. "We know there are still genetically modified soybeans being planted and harvested in the area. The authorities don't have the capacity to solve these problems. The seed is everywhere already."

TWO HOURS OUTSIDE HOPELCHÉN, about 1,500 Mennonites live in a cluster of small communities that form the colony of Nuevo Durango. The dusty road leads straight to the grain silo, where farmers in nearly identical overalls and plaid shirts wait next to a small shop selling tubs of agrochemicals and

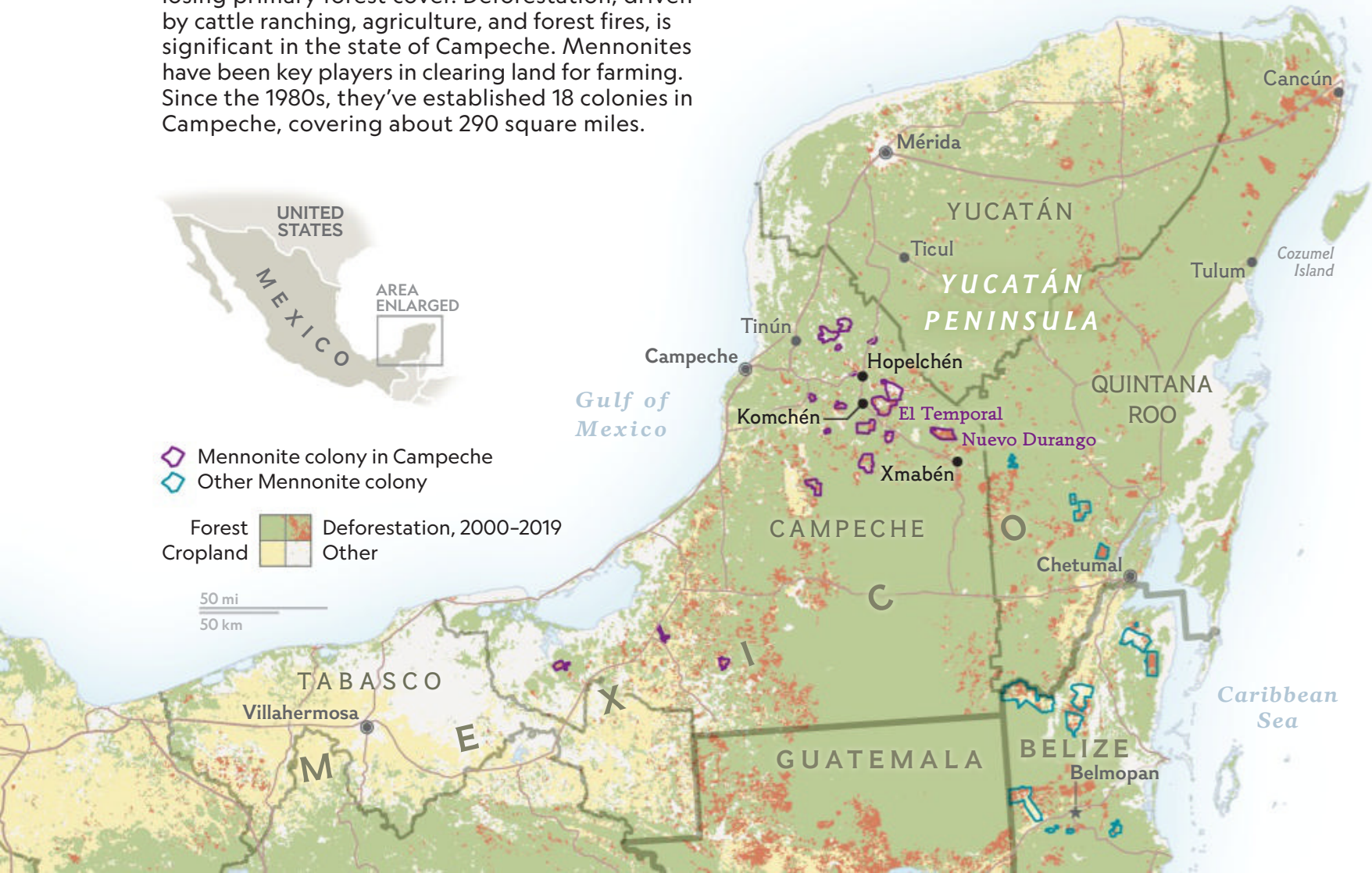
bags of seed. At dusk, a dim light illuminates a woman making dinner in the single-story home of Heinrich Dyck, one of the colony's two governors. A lanky cowboy type, he comes outside trailed by his eight children. Swarmed by a halo of shrill bugs, he pulls a chair into the yard and describes the colony's operations.

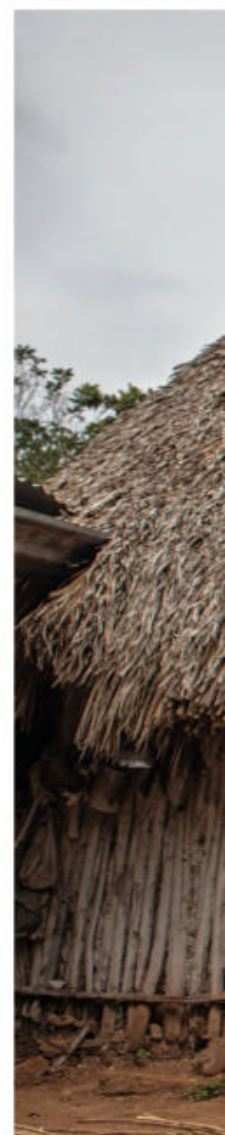
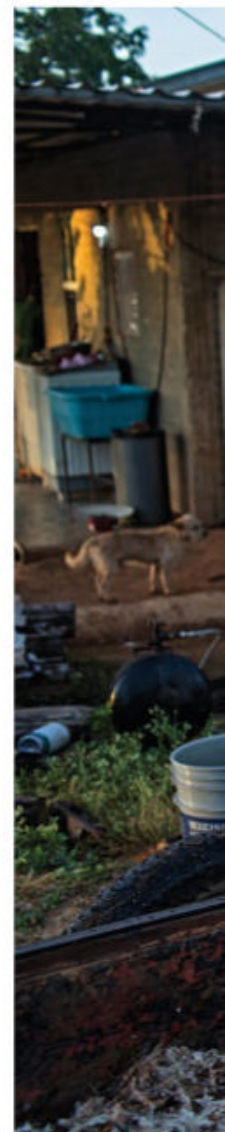
In 2016, Dyck says, government officials visited to announce the ban on planting transgenic soybeans. "They said the bees are dying because of liquids we use on soy," he says. According to Dyck, Nuevo Durango's farmers mostly respected the ruling. But in 2017, when the government checked the fields, the farmers weren't fined for the small amount of transgenic soybeans they'd planted anyway. (Other Mennonite communities were fined for illegal clear-cutting.) So the next year they planted the majority of their 3,200 acres with transgenic seeds. Now they plant roughly 4,500 acres.

Blackened weeds and weed-free soybean fields across the colony are a sign of glyphosate, which kills everything but the soybean plants—they're

CAMPECHE COLONIES

Mexico is among the top 10 tropical countries losing primary forest cover. Deforestation, driven by cattle ranching, agriculture, and forest fires, is significant in the state of Campeche. Mennonites have been key players in clearing land for farming. Since the 1980s, they've established 18 colonies in Campeche, covering about 290 square miles.







The relationship is complex: Maya beekeepers who strongly oppose the Mennonites' methods express admiration for their work ethic and business acumen.



**CLOCKWISE
FROM TOP LEFT**

Ten-year-old Belén Madero Tuyub listens to a Sunday evening church service in Xmabén, Campeche. Her father, Hugo Eugenio Madero, is a beekeeper whose honey production has declined.

Anna Ham cleans a pig's head at El Temporal, a Mennonite colony. Her family gives the head and organ meats of the pig to its Mexican employees.

Beekeeper Carlos Francisco Balán Mex plays with his grandson in the village of Tinún. Unable to make a living with honey, he began driving a bus.

A Mennonite farmer passes the church in Nuevo Durango. Old Colony Mennonites, a deeply conservative group, receive a primarily religious education.

engineered to resist it. Earlier that day, as a harvesting machine chewed through stalks of soy, a Mennonite farmer waiting in the shade said that over the previous four months he'd sprayed his 22 acres of soybeans four times, each time with seven gallons of glyphosate.

The issue of transgenic soybeans is not on the minds of Nuevo Durango's farmers. Though they profess to have no conflict with Maya beekeepers, they don't trust the claims that glyphosate is harming bees; some keep bees themselves and say their own hives haven't suffered.

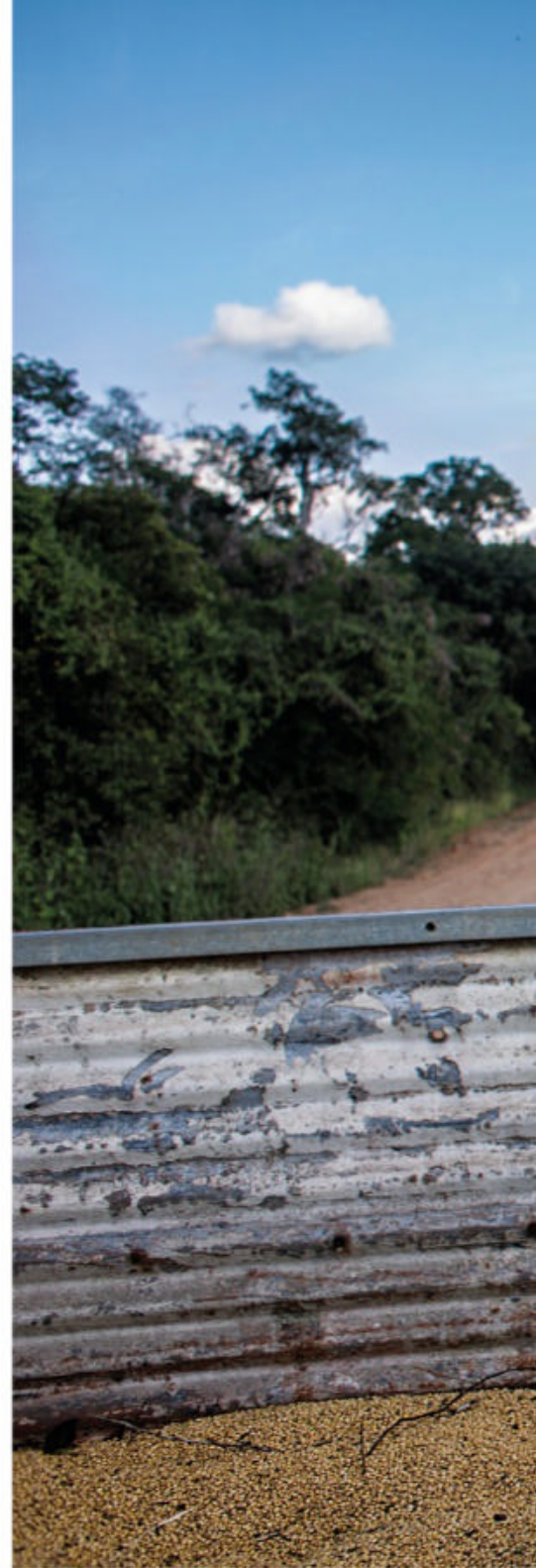
Their main problem, says Dyck, is the need for more land for younger generations to farm and raise families. The colony recently acquired nearly 10,000 acres by joining the traditional council of landowners—the *ejidatario*—in the nearby town of Xmabén. That boosts the Mennonites' landholdings by more than 50 percent and gives space for four more camps, Dyck says.

More than half of Mexico's forests are owned communally by these land councils, and often this has proved key to their conservation. But in Campeche, forest is turning into farmland. At the turn of the century, nearly 80 percent of the state was forested, and almost half of that was primary forest. Since 2002, according to the monitoring site Global Forest Watch, Campeche has lost more than 526,000 acres of primary forest—almost 10 percent of the total—and 1.9 million acres of forest overall. This rate has put Mexico in the top 10 tropical countries in the world losing primary forest cover. The governments of all three states on the Yucatán Peninsula have pledged to end deforestation and begin restoring land on the peninsula by 2030. That is not the Mennonites' agenda, however.

OLD COLONY MENNONITE communities are extremely insular, with no overarching governing body. Bonnie Klassen, who oversees humanitarian and community development efforts in Latin America for the Mennonite Central Committee (MCC), which is run by modern members of the religion, says that most Old Colony Mennonites get five or six years of education, centered on religion rather than science.

In Bolivia the MCC has mediated land conflicts and deforestation issues between Indigenous peoples and Old Colony Mennonites. Klassen believes that the Mennonites will abide by the

Peter Peters, a 10-year-old Mennonite, rides in his father's truck to the silo in Nuevo Durango, where the soybean harvest will be weighed and deposited. The colony struck a deal with its Maya neighbors to increase its landholdings by over 50 percent, making room for the next generation of farmers.



law—if it's enforced. "If you live in a country where laws are not implemented, you prioritize the ones that are," she says. The Mexican government isn't enforcing the ban on GM soybeans, and court-ordered consultations with Indigenous beekeepers—who want the ban to be enforced and the pesticide spraying to stop—haven't really gotten off the ground. It's unclear where the transgenic seeds are coming from; Monsanto, now Bayer, says it's not involved. The company says, however, that it will seek to get its transgenic soybean permit reinstated. Then, says Rodrigo Ojeda, a Bayer lawyer, it aims to strike a deal with the Maya communities. "We believe there's a way to have GM soybean coexist with production of honey by local producers," he says.

But the relationship between Mennonites and the Maya in Campeche is more complex. Maya



communities are embedded in the agribusiness economy built by the Mennonites; many Maya families who rely on beekeeping may also depend, at least indirectly, on the type of farming they say harms it. The 200 landowners in Xmabén who agreed to transfer communal land to the Mennonites each received nearly \$10,000, according to a beekeeper whose family was part of the sale. Beekeepers, even some who strongly oppose the Mennonites' methods, express admiration for their work ethic and business acumen.

Edi Alimi Sánchez embodies this complicated relationship. The lifelong beekeeper sits on a plastic-covered couch, turns down his blaring TV, and describes a common situation in his town of Komchén: For more than 10 years he rented his land to Mennonites—just like most of his neighbors. The Mennonites planted transgenic crops

about 20 yards from his beehives.

Sánchez didn't kick them out, because he no longer could afford the machines and manpower to harvest his own land. When his son-in-law took over the planting recently, it was too late to save the bees. Over the years, Sánchez has lost most of his hives. And he knows there's no recourse to stop the transgenic planting. "We can't do anything. The supreme court can't do anything," he says. "It's politics. There's money."

Nevertheless, Sánchez doesn't consider the Mennonites as enemies. "They're good people," he says. "It's just that they destroy nature." □

Staff writer **Nina Storchlic**'s last story in Mexico was about a cross-border high school cheer team. Photographer **Nadia Shira Cohen** focuses on social injustice and environmental issues, often in Latin America.

THE LURE

OF TRIESTE

BY ROBERT DRAPER
PHOTOGRAPHS BY CHIARA GOIA



Northern Italy's elegant and vibrant
border city has long been an overlooked
cultural gem. Now renewed interest in its
port could bring a new era of prosperity.





In a streetlight's amber glow, Verdiana Calmo entertains some friends in Piazza di Cavana. A century ago, the square was a bawdy magnet for sailors in transit. Today it draws young night crawlers who converse loudly while taking in the saline Mediterranean air.

PREVIOUS PHOTO

Reflecting the port city's storied maritime history, the annual Barcolana regatta unfurls behind Victory Lighthouse, which memorializes those who died at sea in World War I.



Unless the epic bora wind is blowing in the colder months, there are only good routes to stroll through the Italian city of Trieste, its uncluttered streets framed by noble Habsburg-era architecture.

BY ITALIAN STANDARDS, Trieste is strikingly diverse, owing both to its days as the Austro-Hungarian Empire's thriving port city and to its location, tucked between central Europe and the Balkans. It is a borderland of merchants and transients, each leaving a cultural footprint.

One cloudless October morning, I headed from my rented flat in the working-class neighborhood of San Giacomo to the center of Italy's 16th biggest city (population 200,121). On my way, I passed the ruins of a first-century Roman theater, a domed 19th-century Serbian Orthodox church, and a procession of African street vendors walking from the train station. The air off



The Piazza Unità d'Italia, Trieste's historic main square and one of Italy's grandest, stretches to the Adriatic Sea. During the Roman era, it was a harbor. Under Fascist rule, Benito Mussolini announced new racial laws from the piazza. Today, like the rest of the city, it's a space that's both welcoming and introspective.

the Adriatic Sea was faintly saline, redolent as well of roasted coffee.

I had been to Trieste at least a dozen times since my first visit in 1996, but never for more than a day or two. A few glasses of Slovenian wine and acerbic dialogue with the bartender at Gran Malabar. Razor clams and truffles at Le Baretine. A hike across the rugged Carso plateau hovering over the sea, immersed in the blazing red feathery flowerers of smoke trees. A whiff of something deeper but requiring no urgent response. Trieste would always be just as I left it—or so I believed until the spring of 2019, when Italy began to consider hitching the nation's rickety economic

wagon to China, with Trieste as its linchpin. Thereupon I began a monthlong stay, in hopes of finally understanding Italy's peripheral city.

My destination this day was a square named after Guglielmo Oberdan, who failed to assassinate the emperor in 1882 and in his dying words hollered, "*Viva l'Italia! Viva Trieste libera!*" from the gallows. The 24-year-old Italian nationalist was not the only one to suffer here. Beneath me was a complex of tunnels that Nazis occupying Trieste during World War II used to interrogate and torture Jews and Slovenians before sending some across town to Italy's sole extermination camp. I studied plaques commemorating the torments, just as later I would wander through the bunkers. It is a history, taken together, of a people refusing to be told who they are and what to believe, and paying dearly for it.

I was in Piazza Oberdan to meet Ambra Declich, whom I had gotten to know at her elegant restaurant nearby where she often stopped at my table to pour a wine from some obscure vintner above the city on the Carso plateau. Presently she drove up, and we headed off to meet a friend of hers. Declich expertly zigzagged us out of the city and onto the autostrada hugging the coastline. She is by birth a Triestina, as is her mother. Her grandfather was a Jewish shipowner from Montenegro. Her story is of a piece with the greater story of the region. Slender and purposeful, she would seem younger but for the world-weariness in her expression.

We exited at the picturesque seaside village of Muggia along the Slovenian border, following a narrow, hilly country road, headed for Bruno Lenardon's farm. Declich had introduced me to Lenardon's excellent olive oil and white wine,

Trieste has a sizable Chinese community. Wang Yelang (center) owns eight stores with his partner, Alessia Wu, and her family. Qian Zhang (serving) helped start a group to promote Chinese culture as well as assimilation in Trieste. His parents own Ravioleria da Lina, a restaurant specializing in Chinese dumplings.







Edge of Italy

Before World War I, Trieste was the most important seaport in the Austro-Hungarian Empire and a thriving cosmopolitan city. At the war's end, Trieste was folded inside Italy's borders. It would spend decades as a geographic outlier. When Slovenia was part of communist Yugoslavia, the city became an isolated outpost of the West. Today the long-overlooked port is again coveted by foreign powers seeking to dominate global trade.

GULF OF
TRIESTE

which his family has made for more than a century. But Declich brought me here because she knew I was exploring the psychic scars borne by Trieste and its environs. Lenardon, his face reddened and wrinkled from outdoor work, led us to the stone wall on his back porch. There, a wide yellow vertical stripe was painted. A plaque decreed that by the postwar agreement of 1954, Italy fell on one side, Yugoslavia on the other. Lenardon's house was effectively cleaved in two.

Laughing with incredulity, Lenardon said, "We needed a kind of passport to go from one side of the house to the other! And," he added in a rising voice, gesturing to his backyard, "the Yugoslavs got our farmland!"

Not until a half century later, in 2004—after the Soviet Union had collapsed, Yugoslavia had dissolved, and Slovenia entered the European Union—was Lenardon once again permitted to farm the vines and olive trees at the edge of the porch. Even then, he could only rent the property. Still, the wine we tasted that afternoon at his farm didn't express a country. It said what Bruno Lenardon wanted it to say. It was his identity. No one could change that.

THERE IS NOTHING straightforward about Italy's borderland known as Friuli Venezia Giulia. Though among Italy's smallest regions—at about 3,000 square miles, it's a bit larger than Delaware—Friuli extends from the Alps to the Adriatic, with dozens of towns variously famous for their wine, cheese, prosciutto, knives, clocks, and baby furniture. The signs announcing villages are typically in Italian, and then Slovenian or the native tongue, Friulian, or both. It is a serene land now but one pulsing with history, much of it violent. To the average Friulian, Trieste—thrust upon the region as its capital after the Second World War—is all but incomprehensible.

Because the seaside city with the mountainous backdrop is so lovely and accommodating, it does not require visitors to think deep thoughts about it. And yet they invariably find themselves doing so. In her 2001 masterpiece, *Trieste and the Meaning of Nowhere*, the British travel journalist Jan Morris described the city as "isolated," "ambivalent," "hemmed in." Its fame as the Austrian empire's indispensable port city lapsed a century ago, leaving Trieste in a state of slow, elegant decline. Morris ascribed to the city "sweet melancholy," a forlornness that in my experience does not describe the Triestini themselves.

More accurately, they are freighted with a history of tragic quarrel. Armed police protect the city's lone Jewish primary school. Vendors at the antique market sell books glorifying dictator Benito Mussolini. On the first day of every May, Europe's Labor Day, Slovenian residents fly red communist flags from their windows to celebrate the city's liberation by the Yugoslavs in 1945. Memorials also acknowledge that the same troops rounded up hundreds of Italian soldiers and civilians alike, shot them, and threw them in deep natural sinkholes known as *foibe*. "Trieste is not resolved the way Berlin was resolved. How many were in the foibe?" said writer Cristina Battocletti. "There's no way to know the truth. The story is not clear."

Still, the Triestini do not manifest their disquieting history by recoiling from the outside world—far from it. "You can say that Trieste is the most European city in Italy," says the region's former president, Debora Serracchiani—by which she means that the border city historically has absorbed whole communities of Jews, Muslims, Slovenians, Hungarians, Croats, Greeks, and Poles. Many of my neighbors in San Giacomo were Serbian laborers. I bought a kitchen knife from a store owned by a thoroughly Italianized Chinese immigrant named Alessia Wu; and on the rare day when I required a break from Italian cuisine, I walked to an unprepossessing restaurant named Ravioleria da Lina, where exquisite homemade dumplings were served to me by the Chinese proprietress, who spoke only her native tongue.

At its core, Trieste is a city of coffee addicts and barstool philosophers who tend not to overwork. By culture, they are Italian; by disposition, they are molded by the natural environs. They drink native wines—Malvasia, Vitovska, Terrano—that taste of sea and stone. They eat the inimitable Carso cheese, Jamar, possessing an almost primal earthy-milk flavor no doubt derived from having been aged in caves more than 200 feet deep. Whenever possible, they are outdoors; at the first rumor of summer, the Triestini stream to the beaches. When the city's disorderly mascot, the bora, roars in from the mountains, some plant themselves on the Molo Audace pier and dare the hundred-mile-an-hour wind to toss them into the sea. As Barbara Franchin, a fashion and design entrepreneur, said to me with deadly earnestness: "I like to stand in the bora for 10 minutes, to remind myself I physically exist."



Trieste-based Fincantieri, one of the world's largest shipbuilders, repairs and reconditions cruise ships and other vessels at Arsenale Triestino San Marco, a shipyard that dates to the mid-1800s. The growing popularity of cruises in the 1990s boosted the fortunes of the city's shipyards.



**CLOCKWISE
FROM TOP LEFT**

Marco and Andrea Bazzara, who work at their family's coffee company, smell ground coffee to test its aroma, the first step in their evaluation. Trieste is renowned for its coffee and coffeehouses.

Girls in traditional Serbian dress attend Mass during a celebration of the 150th anniversary of St. Spyridon Serbian Orthodox Church. As a crossroads for the region's many cultures, the city is a mosaic of ethnic groups.

Benedetta Renier and Jili Yao throw their son, Valentino, a party to celebrate his 100th day, a Chinese tradition. The two met when Renier was traveling in Shanghai and now live in Trieste, where Renier grew up.

University of Trieste students gather at Antico Caffè San Marco, which opened in 1914, when the city was still part of the Austro-Hungarian Empire. It was among the great cafés that drew local intellectuals and literary eminences such as James Joyce, Italo Svevo, and Umberto Saba.





The seaside city is so lovely and accommodating, it does not require visitors to think deep thoughts about it.

Evidence that the Triestini are—as others in Friuli often claim—prone to eccentricity is not hard to find. One can go to Pedocin, a beach that has been happily segregated by sex since 1890. One can stroll to the main commercial square, Piazza della Borsa, where a banner proclaims, “Welcome to the Free Territory of Trieste”—a reference to a belief long held by some that the city was illegally annexed by Italy. Or one can observe that Trieste’s emblematic literary character is the neurotic, chain-smoking psychiatric patient in the Triestino writer Italo Svevo’s 1923 novel, *Zeno’s Conscience*.

During one of my first visits, on New Year’s Day 1997, the streets were deserted after the previous evening’s revelry. One of the city’s great seafood restaurants, Ai Fiori, happened to be open for lunch. The only other guests were a white-haired couple—locals, my waiter said—at least in their 80s, fresh in tuxedo and ball gown, drinking a bottle of sparkling wine. Even as the place filled and a lively din engulfed them, the handsome old couple seemed in thorough possession of the moment, suspended in a mystery of their own.

I find myself thinking of them as the personification of a city that resides on Italy’s outer edge, both geographically and psychologically. Trieste feels much farther away than the two hours by car separating it from the tourist juggernaut of Venice. Having fought for the city twice over, the government in Rome thereafter relegated it to afterthought. The Iron Curtain to Trieste’s immediate east cut its trade opportunities, which have never recovered. Remote from the rest of the country, Trieste could not compete with Italy’s other major ports, such as Venice

and Genoa. Shipbuilding waned. The population aged. Trieste still had its university, its seasonal tourists, its black market with the Yugoslavs.

MOST OF ALL, TRIESTE would always have its port, with a natural depth up to 60 feet that doesn’t require dredging and is on a Mediterranean corridor that connects central Europe to the Suez Canal. But until recently Trieste’s chief virtue was of little importance to Italy. As I was told, “You were the center of something. And then you became the periphery of everything.”

The man who said this to me, Zeno D’Agostino, is the president of Trieste’s port authority. We were sitting in a snug corner booth at the century-old Antico Caffè San Marco, beside a table of elderly men playing chess. D’Agostino, a slight but dynamic figure, had arrived a half hour late. Rummaging through his pockets, he laughed and said, “I’m trying to find a business card to give you. But the only ones I can find are from the Chinese.”

In March 2019, D’Agostino traveled to Rome to attend the signing of a trade and investment agreement between Italy and China worth \$2.8 billion. Since 2013, China has been pursuing its Belt and Road Initiative, a breathtakingly ambitious infrastructure project to bolster its quest to dominate the global consumer economy. Crucial to its success is maritime trade expansion through the financing of European and Asian port redevelopment.

Once again, the Port of Trieste—with its location, depth, rail linkages, and status as partially exempt from customs duties—had become a foreign power’s object of desire. For an economically hobbled country like Italy, which has weathered three recessions since 2008, such a partnership has an obvious upside.

For some locals, however, the specter of Trieste being drawn out of its contented state of oblivion and into a global game of thrones awakened nationalist impulses. I discovered this one morning when I visited the smoke-filled and oval-shaped office of Giulio Camber.

For 25 of his 67 years, Camber had represented Trieste in the Italian Parliament. He sat at a long wooden desk that was buried in disordered heaps of papers and books. His tie was loosened, and he spoke in a near whisper with his fastidious young male assistant by his side. He proceeded, as Triestini do, to tell the story of his family: how his grandfather fought for the

Italians in World War I, while the man's brother took up arms for the Austro-Hungarian Empire.

Camber campaigned vigorously against Trieste becoming part of China's Belt and Road Initiative, disseminating leaflets with ominous cartoon images of a Chinese dragon. "It makes me laugh to hear people say Italy and China are allies. We're not on the same level as them," he said.

As it would turn out, politicians in Rome shared Camber's concerns that China would demand too much and offer too little. The deal lost momentum. Still, Trieste emerged with leverage, as the port's president had predicted. "Already we have a lot of global players wanting to invest, just because we spoke with the Chinese," he'd told me. Taking advantage of the impasse, a Hamburg company bought a majority stake in one of the port's main shipping terminals. Now Germany stands to be a dominant force on a crucial route linking Europe and Asia.

But the real winner was Trieste, which could reap the economic benefits of a trade partnership without the geopolitical complications of a China-Italy alliance. "Germany is seeing what China saw and what other countries saw in the past—which is that Trieste, as a gateway, has a kind of magic," said Federico Pacorini, whose family has operated one of Trieste's largest multinational logistics companies since 1933.

Pacorini, the antithesis of Giulio Camber, has long agitated for Trieste to envision itself in less parochial terms. "For most of my life I've regretted the opportunities that we're not exploiting. But now we can change that," he said. "We have a beautiful city with a brilliant future. Maybe one day people will say, Ah, Venice—you mean the city that's close to Trieste?"

I BEGAN MY MORNINGS in Trieste with the ritual descent of a hundred or so stairsteps from my flat. Five blocks farther downhill led me to Via Giosuè Carducci (named after Italy's Nobel Prize-winning 19th-century poet), a bustling blue-collar thoroughfare. At the indoor market, I would seek out tomatoes from Sicily, radicchio from Treviso, and wild mushrooms from the Carso. I then took my place among sharp-elbowed housewives at the *pescheria*, mulling over what the fishermen had brought in. One shop across the street offered *jota*, a Slovenian sauerkraut-and-bean soup. Another featured the favored pasta of the region's Carnic Alps, *gnocchi di susine*, or dumplings stuffed with plums.

Among the hardest of choices in Trieste entails which coffee shop to call one's own. I tended to conclude my morning errands at Caffè Umberto Saba, named for another of the city's literary luminaries. The elderly proprietor, Mario Prenz, made a fine cappuccino, while his elegant wife, Germana, invariably sang some indistinct tune to herself as she whisked the beverage my way.

"My wife sometimes sings to herself when she's angry, to distract herself," Prenz told me one morning. He explained that he had arrived in Trieste in 1955 as a teenager whose father had perished in Dachau. While living in a refugee camp that overlooked the sea, he said, "I found this one little flower blossoming"—meaning Germana, a fellow refugee.

"Don't get me started," he muttered when I asked him about the city today. "Nobody's happy. Too much violence. Every day you see it in the newspapers." Prenz was referring to an incident in which a moped thief, from the Dominican Republic, shot two police officers. For weeks it was all the Triestini talked about. The city's mayor, Roberto Dipiazza, decreed a day of mourning.

"The city has no safety problem. I've been mayor for 18 years," Dipiazza told me in his office overlooking the glorious seaside Piazza Unità d'Italia. He went on to observe that most immigrants were in Trieste to find work—and a busier port would bring even more. "Most likely, they'll be coming from other places; the young people here don't want to work." Directing my attention just out the window to a venerated restaurant on the square, he said, "In Caffè degli Specchi, 30 or 40 of the employees aren't Italian."

Still, the mayor well knew that Trieste's history was not one of seamless assimilation—that the city's doorway was darkened by demagogues. A few months earlier, Dipiazza's right-wing deputy mayor, Paolo Polidori, bragged on Facebook that he had gathered up the blankets of a 57-year-old homeless Romanian man and thrown them "with satisfaction" into a trash bin. Polidori added, "Now the place is decent! Will it last? We'll see. The signal is: zero tolerance!!"

A few Triestini left a stack of blankets for the man, with a sign that read: "Dear friend, we hope that tonight you will suffer less from the cold. We apologize on behalf of the city of Trieste."

I RETURNED TO TRIESTE during the first week of 2020. One afternoon I wandered through the lush park surrounding the old San Giovanni

After their wedding, Hanna Petracci and Emmanuel Appiah Manu celebrate outside Trieste's San Giusto Cathedral with her parents, Mauro Petracci and Clara Giovanazzi. Petracci is from Ethiopia and was adopted when she was five. Appiah Manu came to Italy from Ghana when he was nine. He and Petracci met at the University of Trieste.





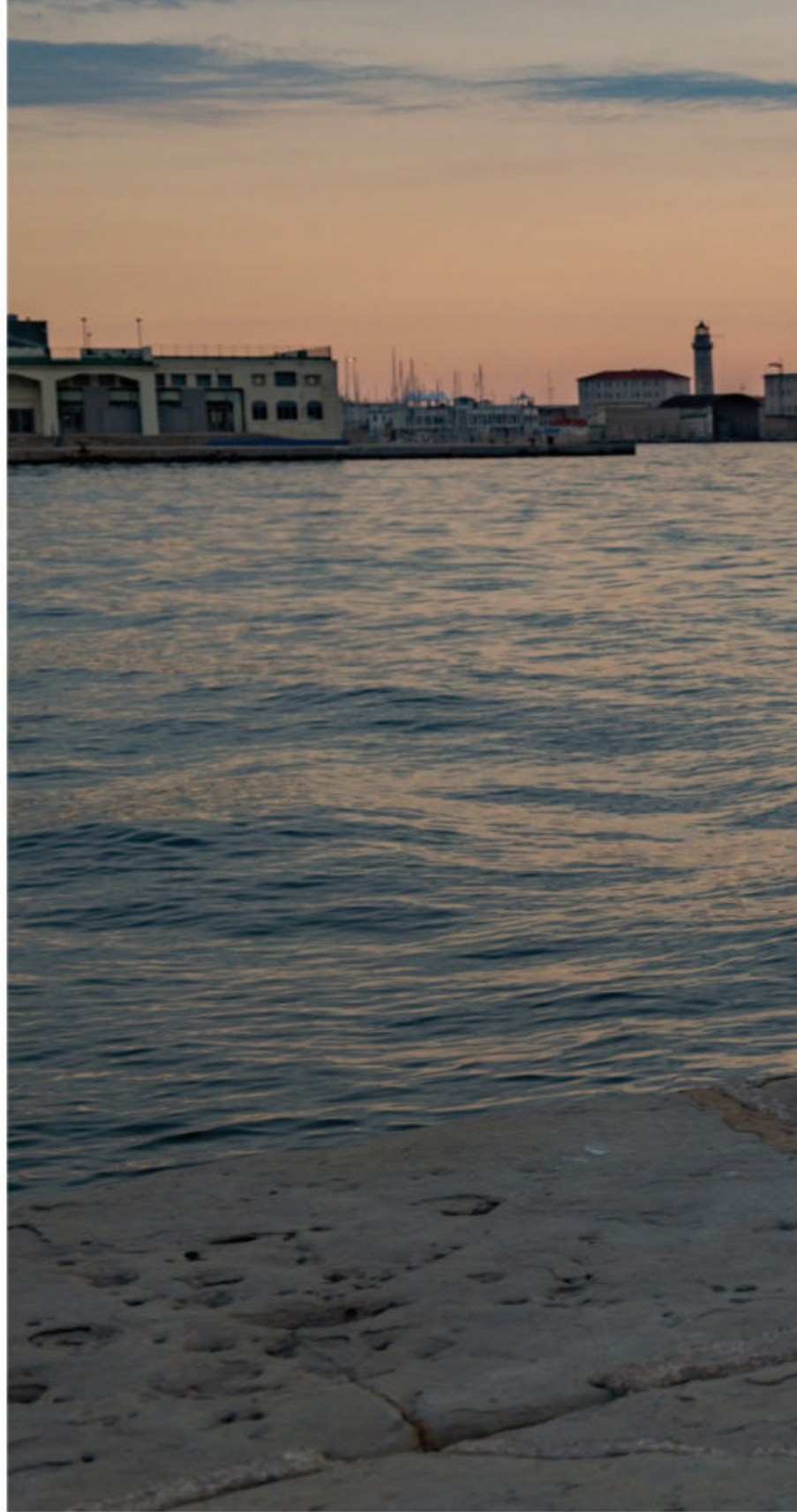
hospital. It had been a barbaric “insane asylum” until the 1970s, when a Venice-born psychiatrist named Franco Basaglia ordered that the patients be treated with compassion, ending the use of restraints, cages, and locked wards. Basaglia’s methods would spur a worldwide reappraisal of mental health treatment. There’s no statue of him in Trieste as there is of James Joyce, who finished *Dubliners* in the city. The two men nonetheless seem connected by a spirit of daring that perhaps only a culturally receptive city could enable. “In both of these incredible moments,” Riccardo Cepach, the curator of the city’s museums devoted to Joyce and Svevo, told me, “Trieste revealed itself as a place that was fertile for revolution.”

Of late, Trieste’s revolutionaries are scientists. With the city’s university, as well as the Abdus Salam International Centre for Theoretical Physics and the Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste has achieved a surprising distinction: It has one of the highest ratios of scientists to residents in Europe. When I visited SISSA, researchers were immersed in esoteric pursuits ranging from studying time perception to developing numerical models for a steel plant.

Within weeks, many of SISSA’s researchers shifted to confront the coronavirus pandemic. Producing reliable serological testing. Developing protective gloves with heightened fingertip sensitivity. Modeling the safety of various social activities. The peripheral city was in the center of things, with help from an unlikely donor: China, which provided 5,000 masks to SISSA.

In the months to follow, of course, we would all be quarantined in our separate peripheries. To contemplate Trieste in a true state of “nowhere”—restaurants and wine bars shuttered, piazzas and promenades expunged of human life—was heart-breaking to me. It turned out to be a foolhardy sentiment. I had failed to take into account Trieste’s historical capacity for hardship. Triestini stoically complied with the restrictions and, when permitted, would dine al fresco at tables set out on city streets. “At my age, 75, it’s better to wait until things are better,” Federico Pacorini told me by phone recently. “Though this is not how I want to spend my last years.”

I then recalled my last meal in the city, with Pacorini and his family at the exquisitely charming Trattoria Nerodiseppia, where in my experience the seafood has no rival. The ever smiling



As the summer sun sets over the Adriatic Sea, Martina Prezzi, a student at the University of Trieste, reads a book on the Molo Audace pier. When it’s warm, Prezzi goes there almost every day. “The sea is the highlight of this city,” she says, “and it’s amazing to have it so close.”



proprietors are in a constant state of apology for the near impossibility of securing a table. The affable shipping magnate apparently had no such difficulty. Table for six, *a presto!*

Pacorini handed me the wine list, bemused that I have made the study of his region's white wines my life's business. We settled into the best offerings of the Adriatic: grilled scallops, sardines with fennel, gnocchi stuffed with sea bream, linguine with clams and zucchini, turbot, sea bass, monkfish. Late in the dinner, Pacorini's daughter-in-law, a witty American interior designer named Casey Jenner, turned to her husband, Federico's son Paolo, and asked

him the question I should have: "So how do you identify yourself? As Italian? Or as a Triestino?"

He smiled slyly. "Triestino first," he said. "Then Italian."

Casey's eyes widened. She is raising a son and daughter with Paolo in the city, loving it for all its eccentricities. Still, she pressed him. "What makes you so proud of being a Triestino?"

"Because," he said, "on the border, you are on the edge of discovery." □

Robert Draper, a contributing writer, plans to return to Trieste as soon as possible. **Chiara Goia** is a freelance photographer based in Milan. This is her first feature for the magazine.



INSTAGRAM

KARINE AIGNER

FROM OUR PHOTOGRAPHERS

WHO

Based in Washington, D.C., she's active in conservation and wildlife photography

WHERE

Yasuní National Park
in Ecuador

WHAT

A Canon 7D Mark II with
a 600mm lens

Every day in the Ecuadorian Amazon can be magic. “It’s like being in the movie *Avatar*,” says Aigner, who goes to the area to give workshops for young photographers. During a boating session on a Napo River tributary, her group spotted a black caiman swarmed by flies with colorful wings. As their boat drifted silently, Aigner captured the moment when two flies landed on the animal’s eyelid. “The Amazon is a place where something incredible always happens,” she says. “You just have to be there to see it.”

This page showcases images from National Geographic’s Instagram accounts—the most popular brand on Instagram. Join more than 223 million followers: [@natgeo](#), [@natgeotravel](#), [@natgeointhefield](#), [@natgeoadventure](#), [@natgeoyourshot](#).

Subscriptions For subscriptions or changes of address, contact Customer Service at [ngmservice.com](#) or call 1-800-647-5463. Outside the U.S. or Canada call +1-515-237-3674.

Contributions to the National Geographic Society are tax deductible under Section 501(c)(3) of the U.S. tax code. I Copyright © 2021 National Geographic Partners, LLC I All rights reserved. National Geographic and Yellow Border: Registered Trademarks © Marcos Registradas. National Geographic assumes no responsibility for unsolicited materials. Printed in U.S.A. I For corrections and clarifications, go to [natgeo.com/corrections](#).

NATIONAL GEOGRAPHIC (ISSN 0027-9358) PUBLISHED MONTHLY BY NATIONAL GEOGRAPHIC PARTNERS, LLC, 1145 17TH ST. NW, WASHINGTON, DC 20036. \$39 PER YEAR FOR U.S. DELIVERY, \$50.00 TO CANADA, \$69.00 TO INTERNATIONAL ADDRESSES. SINGLE ISSUE: \$8.00 U.S. DELIVERY, \$10.00 CANADA, \$15.00 INTERNATIONAL. (ALL PRICES IN U.S. FUNDS; INCLUDES SHIPPING AND HANDLING.) PERIODICALS POSTAGE PAID AT WASHINGTON, DC, AND ADDITIONAL MAILING OFFICES. POSTMASTER: SEND ADDRESS CHANGES TO NATIONAL GEOGRAPHIC, PO BOX 37545, BOONE, IA 50037. IN CANADA, AGREEMENT NUMBER 1000010298, RETURN UNDELIVERABLE ADDRESSES TO NATIONAL GEOGRAPHIC, PO BOX 819 STN MAIN, MARKHAM, ONTARIO L3P 9Z9. UNITED KINGDOM NEWSSTAND PRICE £6.99. REPR. EN FRANCE: EMD FRANCE SA, BP 1029, 59011 LILLE CEDEX; TEL. 320.300.302; CPPAP 0725U89037; DIRECTEUR PUBLICATION: D. TASSINARI. DIR. RESP. ITALY: RAPP IMD SRL, VIA G. DA VELATE 11, 20162 MILANO; AUT. TRIB. MI 258 26/5/84 POSTE ITALIANE SPA; SPED. ABB. POST. DL 353/2003 (CONV L.27/02/2004 N.46) ART 1 C. 1 DCB MILANO STAMPA. QUAD, MARTINSBURG, WV 25401. SUBSCRIBERS: IF THE POSTAL SERVICE ALERTS US THAT YOUR MAGAZINE IS UNDELIVERABLE, WE HAVE NO FURTHER OBLIGATION UNLESS WE RECEIVE A CORRECTED ADDRESS WITHIN TWO YEARS.

GET YOUR STEPS IN



**THE
EXCEPTIONAL
LIGHT BEER**
2.6g CARBS 90 CALS

Drink responsibly. Corona Premier® Beer. Imported by Crown Imports, Chicago, IL. Per 12 fl. oz. serving average analysis: Calories 90, Carbs 2.6 grams, Protein 0.7 grams, Fat 0.0 grams.

A photograph of an older couple running joyfully on a sandy beach. The man is wearing a red button-down shirt and khaki pants, and the woman is wearing a blue and white striped shirt and jeans. They are both laughing and looking towards the camera. The background shows a rocky cliff and the ocean waves.

Realizing wherever
you go, is exactly
where you want to be.

This is financial security

There's no feeling quite like having the financial security to pursue what's most meaningful to you. From maintaining monthly income in retirement to protecting you from unexpected long-term care costs, Lincoln Financial solutions can help bring you the security and freedom to live life the way you intended.

lfg.com/financialsecurity

 **Lincoln Financial[®]**

Plan | Protect | Retire

LCN-3500051-031921. Lincoln Financial Group is the marketing name for Lincoln National Corporation and insurance company affiliates, including The Lincoln National Life Insurance Company, Fort Wayne, IN, and in New York, Lincoln Life & Annuity Company of New York, Syracuse, NY. Variable products distributed by broker/dealer-affiliates. Lincoln Financial Distributors, Inc., Radnor, PA. Product guarantees are subject to the claims-paying ability of the issuing company. © 2021 Lincoln National Corporation.



GET OUTSIDE! ADVENTURE AWAITS

